

Grant Proposal Guide

***NSF 99-2
October 1998
(Replaces NSF 98-2)***



**National Science Foundation
Office of Budget, Finance & Award Management
4201 Wilson Boulevard
Arlington, VA 22230**

August 28, 1998

Dear Colleagues:

We have published an updated version of the NSF *Grant Proposal Guide* (GPG) (NSF 99-2) and *Proposal Forms Kit* (NSF 99-3). This document supersedes the prior version of the GPG (NSF 98-2) and the Proposal Forms Kit (NSF 98-3.) This revision has been necessitated by and is consistent with the:

- ❖ need to incorporate additional references throughout the document to the NSF FastLane system as well as access to other electronic sources of information, where appropriate;
- ❖ desire of some NSF Directorates to require use of FastLane in proposal preparation for all proposals – including unsolicited proposals. As a result, proposers must now check the FastLane Web site¹ prior to proposal preparation and submission to verify whether use of FastLane is required in preparation of all or part of a proposal;
- ❖ need to further protect the privacy of PIs by removing the Social Security Number (SSN) from Page 1 of the Proposal Cover Sheet (the SSN will now be collected on Page 2 of the Cover Sheet which is submitted as a single copy document);
- ❖ implementation of revised OMB guidelines on race and ethnicity standards (NSF Form 1225);
- ❖ desire to incorporate suggestions for clarifications made by the various NSF customer communities and NSF staff since the last revision of the GPG in October 1997; and
- ❖ implementation of the NSF electronic Project Reporting System. This new electronic reporting capability has been added as a new component of FastLane and will permit electronic submission and updating of reports on each of a PI's NSF project(s). As designed, PIs will not need to re-enter information previously provided, either with the proposal or in earlier updates using the electronic system. Effective October 1, 1998, PIs are required to use the new reporting **format** for preparation of annual and final project reports.

Other sections have been revised, as appropriate, for clarity as well as to make the Guide consistent with current NSF policies, practices and procedures. A summary of significant changes is included on pages iii and iv of the GPG.

The GPG (including all forms) is available on the NSF Web site at: <http://www.nsf.gov> in HTML, Microsoft Word, ASCII text, and Portable Document Format (PDF).

Please address any questions or comments about the GPG to the Division of Contracts, Policy & Oversight, Policy Office, on 703-306-1243 or by e-mail to policy@nsf.gov.

Joseph L. Kull
Chief Financial Officer

¹ A listing of NSF programs which require use of FastLane in proposal submission may be obtained at: "<https://www.fastlane.nsf.gov/a0/fldeadli.htm>".

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency, created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). Its aim is to promote and advance scientific and engineering progress in the United States (US). The Foundation is also committed to ensuring the nation's supply of scientists, engineers and science educators.

NSF funds research and education in most fields of science and engineering. It does this through grants, contracts and cooperative agreements to more than 2,000 colleges, universities and other research and/or education organizations in all parts of the US. NSF receives approximately 30,000 proposals annually for new or renewal support for research, graduate and post-doctoral fellowships, and math/science/engineering education projects, and makes approximately 10,000 new awards. These typically are awarded to universities, colleges, academic consortia, non-profit institutions and small businesses. The agency operates no laboratories itself but does support National Research Centers, certain oceanographic vessels and Antarctic research stations. The Foundation also supports cooperative research between universities and industry and US participation in international scientific efforts.

NSF is generally structured by fields of science and engineering and science education but also considers activities that cross traditional fields by coordinating review across the Foundation. NSF's staff is assisted by advisors, primarily from the scientific and engineering communities, who serve on panels or as mail reviewers of proposals. NSF Program Officers who are experts in the field or area of the proposal are responsible for award recommendations.

Grantees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals on behalf of all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities and persons with disabilities to participate fully in its programs. In accordance with Federal statutes, regulations and NSF policies, no person on grounds of race, color, age, sex, national origin or disability shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NSF (some programs may have special requirements that limit eligibility).

Facilitation Awards for Scientists and Engineers with Disabilities provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. (For more information, see Section V.G.)

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 306-0090, FIRS at 1-800-877-8339.

Copies of this Guide (NSF 99-2) or the *Proposal Forms Kit* (NSF 99-3) (which is contained as part of NSF 99-2) are available electronically on the NSF Web site at: <http://www.nsf.gov/cgi-bin/getpub?gpg> in a variety of formats including: HTML, Microsoft Word, ASCII text, and Portable Document Format (PDF). Paper copies may be ordered from:

NSF Clearinghouse
P.O. Box 218
Jessup, MD 20794-0218

Telephone: 301-947-2722
e-mail: pubs@nsf.gov

YEAR 2000 REMINDER

In accordance with Important Notice No. 120 dated June 27, 1997, Subject: *Year 2000 Computer Problem*, NSF awardees are reminded of their responsibility to take appropriate actions to ensure that the NSF activity being supported is not adversely affected by the Year 2000 problem. Potentially affected items include computer systems, databases, and equipment. The National Science Foundation should be notified if an awardee concludes that the Year 2000 will have a significant impact on its ability to carry out an NSF-funded activity. Information concerning Year 2000 activities can be found on the NSF Web site at: "<http://www.nsf.gov/oirm/y2k/start.htm>".

FOREWORD

This Guide provides guidance for the preparation of unsolicited proposals to NSF. Some NSF programs have specific program announcements² that may modify the general provisions of this Guide. Contact with NSF program personnel prior to proposal preparation is encouraged.

Information in this Guide applies to all programs listed in Appendix A and related activities, such as foreign travel, conferences, symposia, equipment and facilities. Sources of additional information on these related activities are noted in the text or are available from appropriate Foundation programs.

General information about NSF programs may be found in the *NSF Guide to Programs*. Additional information about special requirements of individual NSF programs may be obtained from the appropriate Foundation program offices. Information about most program deadlines and target dates for proposals appears in the *NSF Bulletin*, an electronic publication available at: "<http://www.nsf.gov>". Program deadline and target date information also appears in individual program announcements and on relevant NSF Division Web sites. A complete listing of all upcoming deadlines, sorted by date and by program area is available on the NSF Web site at: "<http://www.nsf.gov/home/deadline/deadline.htm>".

NSF generally utilizes grants in support of research and education in science, mathematics, engineering and technology. In cases where assistance projects require substantial NSF technical or managerial involvement during the performance period, NSF uses cooperative agreements. While this Guide is generally applicable to both types of assistance awards, cooperative agreements may include different or additional requirements.

Informal information about NSF activities can be obtained on the Grants Bulletin Board. To make arrangements to access the bulletin board, send your electronic mail address along with your complete name, address and telephone number to grants@nsf.gov.

For detailed information about the award and administration of NSF grants and cooperative agreements, proposers and grantees may refer to the *NSF Grant Policy Manual* (GPM) (NSF 95-26) or to Chapter VI of title 45 of the *Code of Federal Regulations*. The Manual is a compendium of basic NSF policies and procedures for use by the grantee community and NSF staff and is available by subscription from the Superintendent of Documents, Government Printing Office, Washington, DC 20402. The GPM may be ordered through the GPO Web site at: "<http://www.gpo.gov>".

The NSF documents and manuals referenced above, including all forms contained in the GPG, may also be accessed electronically.

Catalog of Federal Domestic Assistance

NSF programs fall under the following categories in the latest Catalog of Federal Domestic Assistance issued by the Office of Management and Budget and the General Services Administration:

- 47.041 - Engineering Grants
- 47.049 - Mathematical and Physical Sciences
- 47.050 - Geosciences
- 47.070 - Computer and Information Science and Engineering
- 47.074 - Biological Sciences
- 47.075 - Social, Behavioral and Economic Sciences
- 47.076 - Education and Human Resources
- 47.078 - Office of Polar Programs

A listing of NSF Divisions, by CFDA number, is available on the NSF Web site at: "<http://www.nsf.gov/bfa/cpo/policy/cfda.htm>".

² Unless otherwise specified, the term "program announcement" also refers to program solicitations and other NSF proposal-generating mechanisms.

SUMMARY OF SIGNIFICANT CHANGES

- ❖ **Overall Document** — The entire document has been supplemented with additional coverage on the NSF FastLane system and other electronic sources of information such as the NSF Web site.
- ❖ **About the National Science Foundation** — A notice has been added reminding NSF awardees of their responsibilities regarding the Year 2000 computer problem.
- ❖ **Foreword** — has been revised to provide:
 - Information regarding the availability of the new electronic *NSF Bulletin*; and
 - An updated listing of applicable NSF CFDA numbers.
- ❖ **Chapter I — Paragraph A, Overview**, has been modified to include a notice of the availability of the NSF Custom News Service (CNS). The CNS is an information-delivery system designed to keep potential proposers and other interested parties apprised of the issuance of new program announcements through the Internet e-mail system or the user's Web browser.
- ❖ **Chapter I — Paragraph B, The Proposal**, has been supplemented with instructions on treatment of patentable ideas, trade secrets, and privileged or confidential information. This coverage was previously included under II.D.7, Budget.
- ❖ **Chapter I — Paragraph D, Who May Submit Proposals**, has been clarified to recognize that some program announcements place restrictions on the individuals and organizations that are eligible to submit proposals to NSF.
- ❖ **Chapter I — Paragraph F, How to Submit Proposals**, has been revised to stipulate that:
 - Some NSF programs and program announcements may require electronic submission of all or part of a proposal, including unsolicited proposals. Proposers are advised to check the FastLane Web site prior to proposal submission to check whether submission via FastLane is required.
 - For proposals submitted via FastLane, the signed proposal Cover Sheet (NSF Form 1207) should be forwarded to the address identified on page 3 of the GPG and received by NSF within five working days following proposal submission.
- ❖ **Chapter II, Instructions for Proposal Preparation**, has been supplemented with a Web address for Frequently Asked Questions regarding proposal preparation and submission.
- ❖ **Chapter II — Paragraph B, Special Instructions for Single-Copy Documents**, has been revised to eliminate the statement regarding the inability to use FastLane for the *List of Suggested Reviewers or Reviewers Not to Include*. This item may now be submitted electronically via FastLane.
- ❖ **Chapter II — Paragraph B.1, Information About Principal Investigators/Project Directors and co-Principal Investigators/co-Project Directors**, has been changed to indicate that the name(s) of the PI(s) is required to be submitted on the new NSF Form 1225. The coverage also specifies that a copy of the form must be submitted for each identified PI/PD and co-PI/co-PD on the proposal.
- ❖ **Chapter II — Paragraph B.4, Deviation Authorization**, has been deleted. All coverage on deviations is now contained in Section II.A.
- ❖ **Chapter II — Paragraph D.1, Cover Sheet for Proposal to the National Science Foundation**, has been revised to:
 - add a new block for the proposer to identify any related preproposal number assigned by NSF, in submission of the full proposal; and
 - specify which elements of the NSF Form 1207 are for “**NSF Use Only**” and should **not** be completed by the proposing organization.
- ❖ **Chapter II — Paragraph D.4, Project Description**, has been revised to:
 - supplement the description with increased coverage on the second merit review criterion; and
 - delete coverage on submission of Results from Prior NSF Support via the new FastLane Project Reporting system. This capability will be delayed until some undetermined future date.
- ❖ **Chapter II — Paragraph D.5, References Cited**, has been supplemented with a reminder that the “References Cited” section of the proposal should not be used to provide parenthetical information outside of the 15-page project description.

- ❖ **Chapter II — Paragraph D.7.a.(iii), Confidential Budgetary Information**, has been revised to address “Confidential Budgetary Information” in lieu of confidential information impacting the entire proposal. A Web address also has been added to obtain instructions for submission of this information via FastLane.
- ❖ **Chapter II — Paragraph D.7.d, Travel**, has been reorganized to move the material describing travel requirements from paragraph ii to paragraph i since the coverage applies to both domestic and foreign travel.
- ❖ **Chapter II — Paragraph D.7.f.(v), Subawards**, has been updated to specify how to submit signed subaward budgets for proposals that are submitted via FastLane.
- ❖ **Chapter II — Paragraph D.10, Special Information & Supplementary Documentation**, has been supplemented with instructions for submission of Special Information and Supplementary Documentation for proposals that are submitted via FastLane.
- ❖ **Chapter II — Paragraph D.12.b, Group and Collaborative Proposals**, has been supplemented with instructions for submission of collaborative proposals via FastLane.
- ❖ **Chapter III — a new Paragraph B, Administrative Corrections to FastLane Proposals**, has been added to address a new FastLane capability for minor **administrative** corrections to proposals. This new capability will be available in spring 1999. Detailed instructions for use of this feature will be made available at that time. All the remaining paragraphs in Chapter III have been renumbered accordingly.
- ❖ **Chapter III — Paragraph C, Revisions to Proposals Made During the Review Process**, has been clarified to more clearly describe the role of the NSF Program Officer in negotiation of award budgets.
- ❖ **Chapter V — Paragraph F, Human Resources Development**, has been revised to include an updated listing of NSF programs whose purpose is to increase participation by women, minorities, persons with disabilities and by faculty from minority institutions and predominantly undergraduate institutions.
- ❖ **Chapter VI — Paragraphs C.1-2, No-Cost Extensions**, have been modified to stipulate that some NSF Directorates now require electronic submission of notifications of grantee authorized extensions and requests for NSF approved extensions via FastLane. Prior to submission, grantees should check the cognizant Directorate or FastLane Web page to see if submission via FastLane is required.
- ❖ **Chapter VII, Grant Administration Highlights**, has been supplemented with a Web address for Frequently Asked Questions regarding grant administration.
- ❖ **Chapter VII — Paragraph C, Transfer of PI**, has been updated with language to remind grantees that the NSF FastLane system is not yet available for grant transfer requests.
- ❖ **Chapter VII — Paragraph G, Grant Reports**, has been revised to combine the coverage on Annual and Final Project Reports and to require use of the new electronic report formats effective October 1, 1998. While electronic submission is strongly encouraged, paper copies of the report formats may be obtained from the NSF Clearinghouse.
- ❖ **Chapter VII — Paragraph L, Year 2000 Computer Problem**, has been added to remind NSF awardees of their responsibilities regarding the Year 2000 computer problem.
- ❖ **Appendix A — Programs Providing Support for Scientific & Engineering Research & Education**, has been updated to include the latest listing of NSF programs, numbers of copies of proposals required, and telephone numbers.
- ❖ **Appendix B — Checklist for Proposal Preparation**, has been updated to conform to the requirements contained in this Guide.
- ❖ **Appendix D — NSF Form 1328, Annual NSF Grant Progress Report**, has been deleted. The new format is available electronically via FastLane or in paper form from the NSF Clearinghouse.
- ❖ **Appendix E — NSF Form 98A, Final Project Report, has been deleted.** The new format is available electronically via FastLane or in paper form from the NSF Clearinghouse.

❖ **Proposal Forms Kit** has been revised as follows:

- NSF Form 1225, *Information About Principal Investigators/Project Directors and co-Principal Investigators/co-Project Directors*, has been modified to be consistent with revised OMB guidelines on race and ethnicity standards as well as to request specific information on the disability status of each PI/PD. This form is required to be submitted by each identified PI/PD and co-PI/co-PD on the project.
- NSF Form 1207, *Cover Sheet for Proposal to the National Science Foundation*, has been revised to:
 - ◆ Add a new block to identify any related preproposal number assigned by NSF in submission of the full proposal.
 - ◆ Create separate blocks for “High Degree” and “Year of Degree.”
 - ◆ Move the block for the PI/co-PI Social Security Number to Page 2.
- NSF Form 1359, *Table of Contents*, has been revised to delete the space provided to identify the applicable NSF Award Number for purposes of submitting results from prior support via the NSF electronic reporting system. This capability will be delayed until some undetermined future date.
- NSF Form 1030, *Summary Proposal Budget* instructions have been modified to eliminate consultant travel from inclusion in the travel category. Consultant travel should be included in the amount identified in line G.3, Consultant Services.

TABLE OF CONTENTS

	Page Number
I. Introduction	1
A. Overview	1
1. Unsolicited Proposals.....	1
2. Solicited Proposals	1
3. General.....	1
B. The Proposal.....	1
Proprietary or Privileged Information	2
C. NSF FastLane System	2
D. Who May Submit Proposals	2
Categories of Proposers	2
E. When to Submit Proposals	3
F. How to Submit Proposals.....	3
II. Instructions for Proposal Preparation	5
A. Conformance with Instructions for Proposal Preparation	5
B. Special Instructions for Single-Copy Documents.....	5
1. Information About Principal Investigators/Project Directors and co-Principal Investigators/co-Project Directors.....	5
2. List of Suggested Reviewers or Reviewers Not to Include.....	5
3. Certification Page.....	5
C. Format of the Proposal.....	5
D. Sections of the Proposal	6
1. Cover Sheet for Proposal to the National Science Foundation	6
2. Project Summary.....	7
3. Table of Contents	7
4. Project Description.....	7
Results from Prior NSF Support.....	8
5. References Cited	8
6. Biographical Sketches.....	8
7. Budget	9
a. Salaries and Wages.....	9
(i) Policies.....	9
(ii) Procedures	9
(iii) Confidential Budgetary Information	10
b. Fringe Benefits	10
c. Equipment	10
d. Travel.....	10
(i) General	10
(ii) Domestic Travel.....	10
(iii) Foreign Travel	10
e. Participant Support	10
f. Other Direct Costs.....	10
(i) Materials and Supplies.....	10
(ii) Publication/Documentation/Dissemination.....	11
(iii) Consultant Services.....	11
(iv) Computer Services.....	11
(v) Subawards	11
g. Total Direct Costs.....	11
h. Indirect Costs (also known as Facilities & Administrative Costs).....	11
i. Total Direct and Indirect Costs	11
j. Residual Funds	11
k. Amount of This Request	11
l. Cost Sharing	12
m. Unallowable Costs	12
(i) Entertainment.....	12
(ii) Meals and Coffee Breaks.....	12
(iii) Alcoholic Beverages	12
8. Current and Pending Support.....	12
9. Facilities, Equipment and Other Resources	13
10. Special Information & Supplementary Documentation.....	13
11. Appendices	13

12.	Special Guidelines	13
a.	Small Grants for Exploratory Research (SGER)	13
b.	Group and Collaborative Proposals	14
c.	Equipment Proposals.....	14
d.	Proposals Involving Vertebrate Animals.....	15
e.	Proposals Involving Human Subjects.....	15
III.	NSF Proposal Processing and Review.....	16
A.	Review Criteria.....	16
B.	Administrative Corrections to FastLane Proposals	16
C.	Revisions to Proposals Made During the Review Process.....	16
D.	Award Recommendation.....	17
E.	Copies of Reviews	17
IV.	Withdrawals, Returns and Declinations.....	18
A.	Withdrawals	18
B.	Returns.....	18
C.	Declinations.....	18
D.	Reconsideration.....	18
E.	Resubmission.....	18
V.	Special Programs.....	19
A.	Research Instrumentation/Facilities	19
B.	Conferences, Symposia and Workshops	19
C.	International Cooperative Activities	19
D.	International Travel Grants.....	19
E.	Doctoral Dissertation Research.....	20
F.	Human Resources Development.....	20
G.	Facilitation Awards for Scientists and Engineers with Disabilities	20
H.	Research Opportunity Awards (ROAs)	20
I.	Research Experiences for Undergraduates (REUs)	20
J.	Partnerships for Advanced Computational Infrastructure (PACI)	21
K.	Small Business Innovation Research (SBIR) Program	21
L.	Small Business Technology Transfer (STTR) Program.....	21
VI.	The Award and Continued Support	22
A.	Standard and Continuing Grants.....	22
Effective/Expiration Dates and Preaward Costs.....	22	
B.	Additional Support	22
1.	Incremental Funding.....	22
2.	Renewal Proposals	22
Traditional Renewal.....	22	
Accomplishment-Based Renewal (ABR)	22	
3.	Two-Year Extensions for Special Creativity	23
4.	Supplemental Funding.....	23
C.	No-Cost Extensions	23
1.	Grantee-Authorized Extension.....	23
2.	NSF-Approved Extension.....	23
VII.	Grant Administration Highlights	24
A.	General Requirements.....	24
B.	Prior Approval Requirements.....	24
C.	Transfer of PI	24
D.	Equipment.....	24
E.	Excess Government Property	24
F.	Suspension or Termination of Grants	25
G.	Grant Reports.....	25
1.	Annual and Final Project Reports.....	25
2.	Quarterly and Final Expenditure Reports.....	25
H.	Sharing of Findings, Data and Other Research Products.....	25
I.	Acknowledgment of Support and Disclaimer	25
J.	Release of Grantee Proposal Information	25
K.	Legal Rights to Intellectual Property.....	26
L.	Year 2000 Computer Problem	26
Appendices		
A.	Programs Providing Support for Scientific & Engineering Research & Education	27
B.	Checklist for Proposal Preparation	32
C.	Definitions of Categories of Personnel	33
Proposal Forms Kit		

CHAPTER I

INTRODUCTION

A. OVERVIEW

1. Unsolicited Proposals

The *Grant Proposal Guide* (GPG) provides guidance for preparation of unsolicited proposals to NSF. Proposals submitted in response to NSF program announcements are considered unsolicited and, unless specified otherwise, are prepared in accordance with GPG formatting and other requirements. Proposers should note that awards resulting from unsolicited research proposals are subject to statutory cost sharing. (See Section II.D.7.1 and *Grant Policy Manual* (GPM) Section 330.) In addition, some program announcements may contain other cost sharing/matching requirements. Unless the program announcement identifies other specific criteria, unsolicited proposals are evaluated pursuant to general evaluation criteria identified in Chapter III and compete with each other, but less directly than do solicited proposals.

2. Solicited Proposals

NSF also solicits proposals for support in NSF targeted areas through issuance of specific program solicitations. Program solicitations are specifically designated as such, are more definitive than program announcements and generally describe types of projects the program wishes to fund. Competition among proposals is more focused, and special evaluation and selection procedures are often used. Statutory cost sharing is not required; however, there may be other cost sharing/matching requirements.

Note: The NSF Custom News Service is an information-delivery system designed to keep potential proposers and other interested parties apprised of the issuance of new program announcements and solicitations (as well as other NSF publications and policies) through Internet e-mail or the user's Web browser. Subscribers are informed each time new publications are issued that match their identified interests. To subscribe to the Custom News Service, go to NSF's Web site at: <http://www.nsf.gov> and click on "Custom News" on the toolbar.

3. General

The Foundation considers proposals submitted by individuals or groups for support in most fields of research. (See Appendix A for programs.) Interdisciplinary proposals are also eligible for consideration.

NSF does not normally support technical assistance, pilot plant efforts, research requiring security classification, the development of products for commercial marketing or market research for a particular project or invention. Research with

disease-related goals, including work on the etiology, diagnosis or treatment of physical or mental disease, abnormality, or malfunction in human beings or animals, is normally not supported. Animal models of such conditions or the development or testing of drugs or other procedures for their treatment also are not eligible for support. Research in bioengineering, with diagnosis or treatment-related goals, however, that applies engineering principles to problems in biology and medicine while advancing engineering knowledge is eligible for support. Bioengineering research to aid persons with disabilities is also eligible.

Research proposals to the Biological Sciences Directorate (not proposals for conferences or workshops) cannot be duplicates of proposals to any other Federal agency for simultaneous consideration. The only exceptions to this rule are: (1) when the proposers and program managers at relevant Federal agencies have previously agreed to joint review and possible joint funding of the proposal; or (2) proposals from beginning investigators (individuals who have not been a principal investigator (PI)³ or co-principal investigator (co-PI) on a Federally funded award with the exception of doctoral dissertation, post-doctoral fellowship or research planning grants). For proposers who qualify under this latter exception, the box for "Beginning Investigator" should be checked on the *Cover Sheet for Proposal to the National Science Foundation*, NSF Form 1207.

NSF expects strict adherence to the rules of proper scholarship and attribution. The responsibility for proper attribution and citation rests with authors of a research proposal; all parts of the proposal should be prepared with equal care for this concern. Serious failure to adhere to such standards can result in findings of misconduct in science. NSF policies and rules on Misconduct in Science and Engineering are discussed in GPM Section 930.

B. THE PROPOSAL

The proposal should present the (1) objectives and scientific or educational significance of the proposed work; (2) suitability of the methods to be employed; (3) qualifications of the investigator and the grantee organization⁴; (4) effect of the activity on the infrastructure of science, engineering and education; and (5) amount of funding required. It should present the merits of the proposed project clearly and should be prepared with the care and thoroughness of a paper submitted for publication. Sufficient information should be provided so that reviewers will be able to evaluate the proposal in accordance with the two merit review criteria established by the National Science Board. (See Chapter III.) As a matter of convenience, a checklist is provided as Appendix B, to help assure that proposals are complete before submission to NSF.

³ As used in this Guide, the term "Principal Investigator" also includes the term "Project Director."

⁴ Unless otherwise specified, the term "organization" refers to all categories of proposers.

Proprietary or Privileged Information

Patentable ideas, trade secrets, privileged or confidential commercial or financial information, disclosure of which may harm the proposer, should be included in proposals only when such information is necessary to convey an understanding of the proposed project. Such information should be clearly marked in the proposal or included as a separate statement accompanying the proposal and should be appropriately labeled with a legend such as,

“The following is (proprietary or confidential) information that (name of proposing organization) requests not be released to persons outside the Government, except for purposes of review and evaluation.”

The box for “Proprietary and Privileged Information” should be checked on the proposal Cover Sheet (NSF Form 1207) when the proposal contains such information.

(See also Section VII.J, “Release of Grantee Proposal Information.”)

C. NSF FASTLANE SYSTEM

The NSF FastLane system uses Internet/Web technology to facilitate the way NSF does business with the research, education, and related communities. The NSF FastLane system is available for proposal preparation, submission, status check, project reporting, and post award administrative activities. Its functions may be accessed by using Web browsers that support file upload and forms capabilities (e.g., Netscape Navigator 3.0+ or Microsoft Internet Explorer 4.01+.)

Access to proposal and post-award functions is limited to staff from FastLane registered organizations and is secured through the use of Personal Identification Numbers (PINs). To register an organization, authorized organization representatives must complete the registration form that can be accessed through the Registration Information hyperlink on the FastLane Web site. Once an organization is registered, PINs for individual staff are available from the organization's sponsored projects office.

Detailed information about the FastLane system is available from the FastLane Web site at: “<http://www.fastlane.nsf.gov>”.

D. WHO MAY SUBMIT PROPOSALS

Scientists, engineers and educators usually initiate proposals which are officially submitted by their employing organization. Before formal submission, the proposal may be discussed with appropriate NSF program staff. Graduate students are not encouraged to submit research proposals, but should arrange to serve as research assistants to faculty members. Some NSF divisions accept proposals for Doctoral Dissertation Research Grants when submitted by a faculty member on behalf of the graduate student. The Foundation also provides support specifically for women and minority scientists and engineers, scientists and engineers with disabilities, and faculty at primarily undergraduate academic institutions. (See Chapter V for information about Special Programs.)

Categories of Proposers

Unless the program announcement establishes more restrictive eligibility criteria, individuals and organizations in the following categories may submit unsolicited proposals:

1. *Universities and colleges* ¾ US universities and two- and four-year colleges (including community colleges) acting on behalf of their faculty members.
2. *Non-profit, non-academic organizations* ¾ Independent museums, observatories, research laboratories, professional societies and similar organizations in the US that are directly associated with educational or research activities.
3. *For-profit organizations* ¾ US commercial organizations, especially small businesses with strong capabilities in scientific or engineering research or education. (See Section V.K for specific information on the Small Business Innovation Research (SBIR) program.) An unsolicited proposal from a commercial organization may be funded when the project is of special concern from a national point of view, special resources are available for the work, or the proposed project is especially meritorious. NSF is interested in supporting projects that couple industrial research resources and perspectives with those of universities. Therefore, it especially welcomes proposals for cooperative projects involving both universities and the private sector.
4. *State and Local Governments* ¾ State educational offices or organizations and local school districts may submit proposals intended to broaden the impact, accelerate the pace and increase the effectiveness of improvements in science, mathematics and engineering education in both K–12 and post-secondary levels.
5. *Unaffiliated Individuals* ¾ Scientists, engineers or educators in the US and US citizens may be eligible for support, provided that the individual is not employed by or affiliated with an organization and:
 - ❖ the proposed project is sufficiently meritorious and otherwise complies with the conditions of any relevant program announcement;
 - ❖ the proposer has demonstrated the capability and has access to any necessary facilities to carry out the project; and
 - ❖ the proposer agrees to fiscal arrangements which, in the opinion of the NSF Grants Officer, ensure responsible management of Federal funds.

Unaffiliated individuals should contact the appropriate program before preparing a proposal for submission.

6. *Foreign organizations* ¾ NSF rarely provides support to foreign organizations. NSF will consider proposals for cooperative projects involving US and foreign organizations, provided support is requested only for the US portion of the collaborative effort. (For further information, contact the Division of International Programs, Appendix A.)
7. *Other Federal agencies* ¾ NSF does not normally support research or education activities by scientists, engineers or educators employed by Federal agencies or Federally Funded Research and Development Centers (FFRDCs). A scientist, engineer or educator, however, who has a joint appointment with a university and a Federal agency (such as a Veterans Administration Hospital, or with a university and a FFRDC) may submit proposals through the university and may receive support if he/she is a bona fide faculty

member of the university, although part of his/her salary may be provided by the Federal agency. Under unusual circumstances, other Federal agencies and FFRDCs may submit proposals directly to NSF. Preliminary inquiry should be made to the appropriate program before preparing a proposal for submission.

E. WHEN TO SUBMIT PROPOSALS

Many NSF programs accept proposals at any time. Other programs, however, establish target dates⁵ or deadlines⁶ for submission of proposals to allow time for their consideration by review panels which meet periodically. These target dates and deadlines are published in specific program announcements, which can be obtained from the NSF Clearinghouse at: pubs@nsf.gov or electronically through the NSF Web site at: "<http://www.nsf.gov>".⁷ Unless otherwise stated in a program announcement, proposals must be received by the specified date. A paper proposal received after a deadline, however, may be acceptable if it carries a legible proof-of-mailing date assigned by the carrier and the proof-of-mailing date is not later than one week prior to the deadline date. If the deadline date falls on a weekend, it will be extended to the following Monday; if the date falls on a holiday, it will be extended to the following work day. The deadline date will be waived only in extenuating circumstances. Inquiry about submission may also be made to the appropriate program.

Proposers should allow up to six months for programmatic review and processing (see Chapter III for additional information on the NSF merit review process). In addition, proposers should be aware that the NSF Division of Grants and Agreements generally makes awards to academic institutions within 30 days after the program division makes its recommendation. Grants being made to organizations that have not received an NSF award within the preceding two years, or involving special situations (such as coordination with another Federal agency or a private funding source), cooperative agreements, and other unusual arrangements may require additional review and processing time. Proposals that are time sensitive (e.g., conference, group travel, and research involving ephemeral phenomena) will only be accepted for review if, in the opinion of the cognizant Program Officer, they are received in sufficient time to permit appropriate NSF review and processing to support an award in advance of the activity to be supported. Every effort is made to reach a decision and inform the proposer promptly. Until an award is made, NSF is not responsible for any costs incurred by the proposing organization.

F. HOW TO SUBMIT PROPOSALS

For standard unsolicited proposals, electronic proposal submission via FastLane is the preferred method and is strongly

⁵ Target dates are cutoff dates after which proposals will still be reviewed, although they may miss a particular panel or committee meeting.

⁶ Deadlines are cutoff dates after which proposals usually will not be accepted for review by NSF.

⁷ A complete listing of all upcoming deadlines, sorted by date and by program area is available electronically on the NSF Web site at: "<http://www.nsf.gov/home/deadline/deadline.htm>".

encouraged.⁸ Some NSF programs may **require** electronic submission of all or part of a proposal, including unsolicited proposals. Please check the FastLane Web site prior to proposal submission for a listing of programs and program announcements that require submission via FastLane. Unless otherwise specified by a program or in a program announcement, proposals may continue to be submitted in paper form.

A proposal needs to be submitted only once to NSF, even if review by multiple programs is envisioned by the proposer. The submission of duplicate or substantially similar proposals concurrently for review by more than one program without prior NSF approval may result in the return of the redundant proposals. (See Section IV.B for further information on proposal return.)

The following are specific instructions regarding the submission and receipt of electronic and paper proposals to NSF:

1. **Electronic submission.** A proposal is considered complete when the proposal, including the Project Description, has been submitted to NSF. If the Project Description is included in the electronic submission, unless otherwise specified in a program announcement, the receipt date will be the date the sponsored projects office transmits the proposal to NSF. The signed proposal Cover Sheet (NSF Form 1207) should be forwarded to the following address and received by NSF within five working days following proposal submission.⁹

National Science Foundation
DIS-FastLane Cover Sheet
4201 Wilson Blvd.
Arlington, VA 22230

A proposal may not be processed until the complete proposal (including signed Cover Sheet) has been received by NSF.

2. **Paper submission.** The delivery address **must clearly identify the NSF announcement number** under which the proposal is being submitted, if applicable. If the proposal is not submitted in response to a specific announcement, proposers should enter the NSF Program(s), using Appendix A as a guide, to which the proposal should be directed. NSF will determine which program(s) will evaluate each proposal.

Unless stated otherwise in a program announcement, proposals should not be addressed or sent directly to the cognizant Program Officer. If copies of the proposal are mailed or delivered in more than one package, the number of packages and the NSF Announcement number, if applicable, should be marked on the outside of each package. Proposals must be sent prepaid, not collect. Proposals sent by special messenger or courier should be delivered to the below address, weekdays, except Federal holidays, between the hours of 8:30 a.m. and 5:00 p.m. ET. Contact the NSF Mail Room, (703) 306-0657, with any questions regarding the mailing or delivery of proposals.

⁸Detailed instructions for proposal preparation and submission via FastLane are available at: "<https://www.fastlane.nsf.gov/a1/newstan.htm>".

⁹Program announcements may provide different instructions for submission of the signed Cover Sheet. In these cases, the guidance in the program announcement should be followed.

Proposals must be addressed **exactly** as follows:

ANNOUNCEMENT/SOLICITATION NO. _____
NATIONAL SCIENCE FOUNDATION PPU
NSF PROGRAM _____
4201 WILSON BLVD. ROOM P60
ARLINGTON VA, 22230

3. Acknowledgment of proposal receipt. The acknowledgment of the receipt of the proposal will reference both the NSF proposal number and the cognizant NSF program to which the proposal has been assigned. Communications about the proposal should be addressed to the cognizant Program Officer with reference to the proposal number. Proposers are encouraged to use FastLane to verify the status of their submission to NSF.

CHAPTER II

INSTRUCTIONS FOR PROPOSAL PREPARATION

Organizations applying for the first time, or which have not received an NSF award within the preceding two years, should refer to GPM Section 501, for instructions on specific information that may be requested by NSF.

To facilitate proposal preparation, Frequently Asked Questions (FAQs) regarding proposal preparation and submission are available electronically on the NSF Web site at: "<http://www.nsf.gov/bfa/cpo/policy/ques.htm>".

With the exception of item B.3 below, all standard NSF proposal format items are supported by FastLane.

A. CONFORMANCE WITH INSTRUCTIONS FOR PROPOSAL PREPARATION

It is important that all proposals conform to the instructions provided in the GPG and in the *Proposal Forms Kit*. **Conformance is required and will be strictly enforced unless a deviation has been approved.** Proposals that are not consistent with these instructions may not be considered by NSF. Particular attention is given to proposal length, content and formatting, including the page limitation on the Project Description and other proposal sections, such as the use of Appendices and required content of the Biographical Sketches.

Any deviations from these instructions must be authorized in advance by NSF. Deviations may be authorized in one of two ways:

1. through specification of different requirements in an NSF Announcement; or
2. by the written approval of the cognizant NSF Assistant Director/Office Head or designee. Such deviations may be a "blanket deviation" for a particular program or programs or, in rare instances, an "individual" deviation for a particular proposal.

Proposers may deviate from these instructions only to the extent authorized. Proposals must identify the deviation in one of the following ways as appropriate: (a) by identifying the program announcement number in the appropriate block on the NSF Form 1207; or (b) by identifying the date of the deviation authorization in the program announcement block on the NSF Form 1207, and including one copy of the written deviation authorization with the single-copy documents identified in paragraph B. below. For proposals submitted via FastLane, the name, date and title of the NSF official authorizing the deviation should be entered. Further instructions are available on the FastLane Web site.

B. SPECIAL INSTRUCTIONS FOR SINGLE-COPY DOCUMENTS

The following single-copy documents, if applicable, **should be attached to the front of the proposal** in the order identified below.

1. Information About Principal Investigators/Project Directors and co-Principal Investigators/co-Project Directors (NSF Form 1225)

NSF is committed to providing equal opportunities for participation in its programs and promoting the full use of the Nation's research resources. To aid in meeting these objectives, NSF requests information on the gender, race, ethnicity and disability status of individuals named as PIs or co-PIs on proposals and awards. Except for the required information about current or previous Federal research support and the name(s) of the PI/co-PI, submission of the information on the form is voluntary, and individuals who do not wish to provide the personal information should check the box provided for that purpose. One copy of the form should be submitted for each PI/co-PI identified on the proposal. The forms and the information they contain are accessible by NSF personnel only.

2. List of Suggested Reviewers or Reviewers Not to Include (optional)

Proposers may include, in a cover letter or separate sheet, a list of suggested reviewers that the proposers believe are especially well qualified to review the proposal. Proposers may also designate persons they would prefer not review the proposal, indicating why. These suggestions are optional. The cognizant Program Officer handling the proposal considers the suggestions and may contact the proposer for further information.

3. Certification Page (Page 2 of the Cover Sheet for Proposal to the National Science Foundation, NSF Form 1207)

By signing Page 2 of the NSF Form 1207, PIs and authorized organizational representatives are providing certain required certifications. (See Section II.D.1 for further information regarding certifications.) The NSF FastLane system currently cannot be used to submit this information. Section F of Chapter I contains further instructions for proposals submitted via FastLane.

C. FORMAT OF THE PROPOSAL

Every page of the proposal must be numbered at the bottom center. Proposals must be stapled in the upper-left-hand corner (for copies other than the original, a simple binding such as a comb binding also is permitted) and have 2.5 cm margins at the top, bottom and on each side. The type size must be clear and readily legible, in standard size which is 10 to 12 points. (No smaller than 10 point font size will be accepted.) If constant spacing is used, there should be no more than 12 characters per 2.5 cm, whereas proportional spacing should provide no more than an average of 15 characters per 2.5 cm. While line spacing (single-spaced, double-spaced, etc.) is at the discretion of the proposer; established page limits must be followed and there also must be no more than 6 lines in a vertical space of 2.5 cm. (Individual program announcements may eliminate this proposer option.)

The original signed copy of the proposal should be printed only on one side of each sheet. Additional copies may be printed on both sides. Appendix A indicates the required number of copies of proposals, including the original signed copy.

Pages submitted must be of standard size. Metric A4 (210 mm x 297 mm) is preferred, however, 8 1/2" x 11" (216 mm x 279 mm) may be used. Pages must conform to the formatting instructions (in particular, 2.5 cm margins and type size limitations) described above.

D. SECTIONS OF THE PROPOSAL

Proposers may select any numbering mechanism for the proposal (e.g., sections may be separately paginated and include both the section and page number on the bottom center of each page, or the entire proposal may be numbered consecutively). Proposals submitted via FastLane are automatically paginated. The proposal must be assembled in the following sequence:

Codes:

- ¹ = Use of format required¹⁰
- ² = Use of format optional
- ³ = Use instructions provided in GPG for preparation of this section

Section in Proposal

- ❖ Cover Sheet for Proposal to the National Science Foundation (NSF Form 1207) (page 1 — all copies; page 2 — original signature copy only — see Section II.B.3)¹
- A Project Summary³
- B Table of Contents (NSF Form 1359)¹
- C Project Description (including Results from Prior NSF Support)³
- D References Cited³
- E Biographical Sketches³
- F Budget (NSF Form 1030)(cumulative and annual budgets, including subaward budget(s), if any, and up to three pages of Budget Justification)¹
- G Current and Pending Support (NSF Form 1239)²
- H Facilities, Equipment and Other Resources (NSF Form 1363)²
- I Special Information and Supplementary Documentation³
- J Appendices (Include only if approved in advance of proposal submission by NSF Assistant Director/Office Head, or designee, or by program announcement)

1. Cover Sheet for Proposal to the National Science Foundation

The required format for the *Cover Sheet for Proposal to the National Science Foundation* (NSF Form 1207) is shown in the Proposal Forms Kit. One copy of the proposal must be signed by the PI(s) and an official authorized to commit the organization in business and financial affairs. Other copies may include page 1 of the NSF Form 1207 only.

¹⁰ See Proposal Forms Kit for NSF's Forms Acceptance Policy.

Proposers **must** identify the applicable program announcement number and closing date in the block entitled, "Program Announcement/Solicitation No./Closing Date." If the proposal is not submitted in response to a specific program announcement, proposers must enter "NSF 99-2." Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing. Using Appendix A as a guide, proposers must also enter the NSF Program(s) to which the proposal should be directed in the block entitled, "For Consideration by NSF Organizational Unit."

A block is included for the proposer to enter its organization's Data Universal Numbering System (DUNS) number. The DUNS number is a nine-digit number assigned by Dun and Bradstreet Information Services. If the proposer does not have a DUNS number, it should contact Dun and Bradstreet directly at 800-333-0505 to obtain one. A DUNS number will be provided immediately by telephone at no charge.

Should the project be performed at a place other than where the award is to be made, that should be identified in the block entitled, "Name of Performing Organization." Examples are as follows:

Grantee Organization	Performing Organization
Northern Virginia University	Northern Virginia University Health Center
Southern Virginia University Research Foundation	Southern Virginia University

The title of the project should be brief, scientifically or technically valid, intelligible to a scientifically or technically literate reader, and suitable for use in the public press. NSF may edit the title of a project before making an award.

Some NSF program announcements require submission of both a preproposal and full proposal as part of the proposal process. A new block has been added to identify, in submission of the full proposal, any related preproposal number assigned by NSF.

The proposed duration for which support is requested should be consistent with the nature and complexity of the proposed activity. Grants are normally awarded for up to three years but may be awarded for periods up to five years. The Foundation encourages PIs to request awards for durations of three to five years when such durations are necessary for completion of the proposed work and when such durations are technically and managerially advantageous. Specification of a desired starting date for the project is important and helpful to NSF staff; however, requests for specific effective dates may not be met. Except in special situations, requested effective dates should allow at least six months for NSF review, processing and decision. Should unusual situations (e.g., a long lead time for procurement) create problems regarding the proposed effective date, the PI should consult his/her organization's sponsored projects office.

Should any of the listed items on page 1 apply to a proposal, the appropriate box(es) should be checked.

The following blocks on page 1 are for **NSF USE ONLY** and should be left blank by the proposer: NSF Proposal Number; Date Received; Number of Copies; Division Assigned; Fund Code; and File Location.

The proposer must sign page 2 of the NSF Form 1207 to submit the following required certifications (see Page 2 of the NSF Form 1207 for important considerations regarding completion of the required certifications):

Certification for Principal Investigators and Co-Principal Investigators: The PI (and co-PIs) are required to complete certifications regarding statements contained in the proposal, authorship and reporting of the research and scientific conduct of the project. The signature(s) of the PI (and co-PIs) (including date of signature(s)) are required.

Certification for Authorized Organizational Representative or Individual Applicant: The Authorized Organizational Representative (AOR) is required to complete certifications regarding the accuracy and completeness of statements contained in the proposal; as well as to certify that the organization (or individual) agrees to accept the obligation to comply with award terms and conditions. The AOR's signature (including date of signature) is required. It is the proposing organization's responsibility to assure that only properly authorized individuals sign in this capacity.

Certification Regarding Conflict of Interest: A certification is also included that requires an organizational representative to certify that the institution has implemented and is enforcing a written policy on conflicts of interests consistent with the provisions of *Grant Policy Manual*, Section 510; that, to the best of his/her knowledge, all financial disclosures required by the conflict of interest policy were made; and that conflicts of interests, if any, were or, prior to the institution's expenditure of any funds under the award, will be, satisfactorily managed, reduced or eliminated in accordance with the institution's¹¹ conflict of interest policy. Conflicts that cannot be satisfactorily managed, reduced or eliminated must be disclosed to NSF.

Drug-Free Workplace: The AOR (or individual applicant) is providing the Drug-Free Workplace Certification by signing page 2.

Debt/Debarment and Suspension: The AOR is required to complete the Debt and Debarment or Suspension questions by checking the appropriate boxes.

Certification Regarding Lobbying: The certification on Lobbying Restrictions, entitled *Certification for Contracts, Grants, Loans and Cooperative Agreements*, is included in full text on page 2 of the Cover Sheet. This certification is required when the proposal exceeds \$100,000. Only if, pursuant to paragraph 2 of the certification, submission of the "Disclosure of Lobbying Activities," SF LLL, is required, should the box for "Disclosure of Lobbying Activities" be checked on the Cover Sheet. The signed SF LLL, when applicable, should be included behind the single-copy documents identified in Section II.B. A copy of this form may be

¹¹ For consistency with the DHHS conflict of interest policy, in lieu of "organization," NSF is using the term "institution" which includes all categories of proposers.

obtained from the Policy Office at (703) 306-1243 or by e-mail to policy@nsf.gov.

Profit-making organizations must certify their status by completing each of the appropriate submitting organization boxes on the Cover Sheet, using the following guidelines:

a. A small business must be organized for profit, independently owned and operated (not a subsidiary of or controlled by another firm), have no more than 500 employees, and not be dominant in its field. The appropriate box should also be checked when the proposal involves a cooperative effort between an academic institution and a small business.

b. A minority business must be: (i) at least 51 percent owned by one or more minority or disadvantaged individuals or, in the case of a publicly owned business, have at least 51 percent of the voting stock owned by one or more minority or disadvantaged individuals; and (ii) one whose management and daily business operations are controlled by one or more such individuals.

c. A woman-owned business must be at least 51 percent owned by a woman or women, who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" in this context means being actively involved in the day-to-day management.

2. Project Summary -- Proposal Section A

The proposal must contain a summary of the proposed activity suitable for publication, not more than one page in length. It should not be an abstract of the proposal, but rather a self-contained description of the activity that would result if the proposal were funded. The summary should be written in the third person and include a statement of objectives, methods to be employed and the potential impact of the project on advancing knowledge, science and mathematics education, and/or human resource development. It should be informative to other persons working in the same or related fields and, insofar as possible, understandable to a scientifically or technically literate lay reader.

3. Table of Contents -- Proposal Section B

The required format for the proposal *Table of Contents* (NSF Form 1359) is included in the *Proposal Forms Kit*. A Table of Contents is automatically generated for proposals submitted via FastLane.

4. Project Description -- Proposal Section C (Including Results from Prior NSF Support)

All proposals to NSF will be reviewed utilizing the merit review criteria described in greater length in Chapter III.

The main body of the proposal should be a clear statement of the work to be undertaken and should include: objectives for the period of the proposed work and expected significance; relation to longer-term goals of the PI's project; and relation to the present state of knowledge in the field, to work in progress by the PI under other support and to work in progress elsewhere. The statement should outline the general plan of

work, including the broad design of activities to be undertaken, an adequate description of experimental methods and procedures and, if appropriate, plans for preservation, documentation, and sharing of data, samples, physical collections and other related research products.

The statement should also indicate any broader impacts of the proposed activity, addressing the following: indicate how the project will integrate research and education by advancing discovery and understanding while at the same time promoting teaching, training, and learning; discuss any ways in which the proposed activity will broaden the participation of underrepresented groups; if relevant, discuss how the project will enhance the infrastructure for research and/or education, such as facilities, instrumentation, networks, and partnerships; indicate how the results of the project will be disseminated broadly to enhance scientific and technological understanding; and, identify potential benefits of the proposed activity to society at large.

Any substantial collaboration with individuals not included in the budget should be described and documented with a letter from each collaborator, which should be provided as supplementary documentation and included in Proposal Section I. Brevity will assist reviewers and Foundation staff in dealing effectively with proposals. Therefore, the *Project Description* (including *Results from Prior NSF Support*, which is limited to five pages) may not exceed 15 pages. Visual materials, including charts, graphs, maps, photographs and other pictorial presentations **are included** in the 15-page limitation. Conformance to the 15-page limitation will be strictly enforced and may not be exceeded unless a deviation has been specifically authorized. (Section II.A contains information on deviations.) Group Proposals (see Section II.D.12.b.) may be subject to different page limitations.

A proposal for renewed support, may be either a “traditional” proposal in which the proposed work is documented and described as fully as though the proposer were applying for the first time; or, an “Accomplishment-Based Renewal” (ABR) proposal, in which the project description is replaced by copies of no more than six reprints of publications resulting from the research supported by NSF during the preceding three to five year period, plus a brief summary of plans for the proposed support period. (See Section VI.B.2 for additional information on preparation of Renewal Proposals.)

The Metric Conversion Act of 1975, as amended, and Executive Order 12770 of 1991 encourage Federal agencies to use the Metric System (SI) in procurement, grants and other business-related activities. Proposers are encouraged to use the Metric System of weights and measures in proposals submitted to the Foundation. Grantees are also encouraged to use metric units in reports, publications and correspondence relating to proposals and awards.

Results from Prior NSF Support

If the PI (or any co-PI identified on the proposal) has received NSF funding in the past five years, information on the prior award is required. If the proposer has received *more than one prior award* (excluding amendments), the proposer should report on the award most closely related to the proposal. The following information should be provided:

- a. the NSF award number, amount and period of support;
- b. the title of the project;
- c. summary of the results of the completed work, including, for a research project, any contribution to the development of human resources in science and engineering;
- d. publications resulting from the NSF award;
- e. brief description of available data, samples, physical collections and other related research products not described elsewhere; and
- f. if the proposal is for renewed support, a description of the relation of the completed work to the proposed work.

Reviewers will be asked to comment on the quality of the prior work described in this section of the proposal. Please note that a PI with prior support may use *up to* five pages to describe the results. Results may be summarized in *fewer* than five pages, which would give the proposer the balance of the 15 pages for the Project Description.

Proposals for renewed support of research projects, *for academic institutions only*, must include information on human resources development at the postdoctoral, graduate and undergraduate levels. This may involve, but is not limited to, the role of research in student training, course preparation and seminars (particularly for undergraduates). Special accomplishments in the development of professional scientists and engineers from underrepresented groups should be described. Graduate students who participated in the research should be identified by name. This requirement does not apply to non-academic organizations.

5. References Cited -- Proposal Section D

Reference information is required. Each reference must include the names of all authors in the same sequence in which they appear in the publication, the article title, book or journal title, volume number, page numbers and year of publication. Proposers should be especially careful to follow accepted scholarly practices in providing citations for source materials relied upon when preparing any section of the proposal.

While there is no established page limitation, this section should include bibliographic citations only and should not be used to provide parenthetical information outside of the 15-page project description.

6. Biographical Sketches -- Proposal Section E

Biographical sketches are limited to two pages each and are required for all senior personnel. (See Appendix C for definition of Senior Personnel.) The following information must be provided:

- a. Vitae, listing professional and academic essentials and mailing address;
- b. List of up to 5 publications most closely related to the proposed project and 5 other significant publications, including those accepted for publication. Patents, copyrights or software systems developed may be substituted for publications. Additional lists of publications, invited lectures, etc., should not be included. Only the list of 10 will be used in merit review.

- c. A list of **ALL** persons (including their organizational affiliation), in alphabetical order, who have collaborated on a project or a book, article, report or paper within the last 48 months, including collaborators on the proposal and persons listed in the publications. If there are no collaborators, this should be so indicated.
- d. A list of persons (including their organizational affiliation), over the last five years with whom the individual has had an association as thesis advisor or postdoctoral scholar sponsor. A summary of the total number of graduate students advised and postdoctoral scholars sponsored should also be included.
- e. The names and institutions of the individual's own graduate and postgraduate advisors.

The information in c, d, and e is used to help identify potential conflicts or bias in the selection of reviewers.

For the personnel categories listed below, the proposal also may include information on exceptional qualifications that merit consideration in the evaluation of the proposal.

- a. Postdoctoral associates
- b. Other professionals
- c. Students (research assistants)

For *equipment proposals*, the following should be provided for each auxiliary user:

- a. Short biographical sketch
- b. List of up to five publications most closely related to the proposed acquisition.

7. Budget -- Proposal Section F

The required format for the *Summary Proposal Budget* (NSF Form 1030) is shown in the *Proposal Forms Kit*. In addition to the material provided below, further instructions for completion of the budget (including areas that require justification) are contained on the back of the NSF Form 1030. Locally produced versions of the form may be used, but changes or substitutions should not be made in prescribed budget categories. Unless a particular program announcement stipulates otherwise, each proposal must contain a budget for each year of support requested and a cumulative budget for the full term of requested NSF support. The proposal may request funds under any of the categories listed so long as the item and amount are considered necessary to perform the proposed work and are not precluded by specific program guidelines or applicable cost principles. In addition to the forms, the proposal may include up to three pages of budget justification for the entire period of support.

a. Salaries and Wages (Lines A and B on NSF Form 1030)

(i) Policies

As a general policy, NSF recognizes that salaries of faculty members and other personnel associated directly with the project constitute appropriate direct costs and may be requested in proportion to the effort devoted to the project.

NSF regards research as one of the normal functions of faculty members at institutions of higher education. Compensation for time normally spent on research within the term

of appointment is deemed to be included within the faculty member's regular organizational salary. Grant funds may not be used to augment the total salary or rate of salary of faculty members during the period covered by the term of faculty appointment or to reimburse faculty members for consulting or other time in addition to a regular full-time organizational salary covering the same general period of employment. Exceptions may be considered under certain NSF science and engineering education program announcements for weekend and evening classes or for administrative work done as overload. (See GPM Section 611.)

Summer salary for faculty members on academic-year appointments is limited to no more than two-ninths of their regular academic-year salary. This limit includes summer salary received from all NSF-funded grants.

These same principles apply to other types of organizations, such as research institutes. Since their employment periods are usually annual, salary should be shown under "calendar months." For such persons, "summer salary" is normally inappropriate under an NSF grant.

Sometimes an independent institute or laboratory proposes to employ college or university faculty members on a part-time basis. In such cases, the general intent of the policies above apply, so that an individual's total income will not be augmented in ways that would not be possible under a grant to an academic institution.

In most circumstances, particularly for institutions of higher education, salaries of administrative or clerical staff are included as part of indirect costs (F&A). Salaries of administrative or clerical staff may be requested as direct costs, however, for a project requiring an extensive amount of administrative or clerical support and where these costs can be readily and specifically identified with the project with a high degree of accuracy. The circumstances for requiring direct charging of these services should be clearly described in the budget justification. Such costs, if not clearly justified, may be deleted by NSF.

(ii) Procedures

The names of the PI(s), faculty, and other senior personnel and the estimated number of full-time-equivalent academic-year, summer, or calendar-year person-months for which NSF funding is requested should be listed. For postdoctoral associates and other professionals, each position must be listed, with the number of full-time-equivalent person-months and rate of pay (hourly, monthly or annual). For graduate and undergraduate students, secretarial, clerical, technical, etc., whose time will be charged directly to the project, only the total number of persons and total amount of salaries per year in each category is required. Salaries requested must be consistent with the organization's regular practices.

The budget may request funds for support of graduate or undergraduate research assistants to help carry out the proposed research. Compensation classified as salary payments should be requested in the salaries and wages category. Any direct costs requested for tuition remission should be listed under "Other Direct Costs".

(iii) Confidential Budgetary Information

The proposing organization may request that salary data on senior personnel not be released to persons outside the Government during the review process. In this case, the item for senior personnel salaries in the proposal may appear as a single figure and the person-months represented by that amount omitted. If this option is exercised, however, senior personnel salaries and person-months must be itemized in a separate statement, a single copy of which should accompany the proposal. This statement must include all of the information requested on the NSF Form 1030 for each person involved. NSF will not forward the detailed information to reviewers and will hold it privileged to the extent permitted by law. The information on senior personnel salaries will be used as the basis for determining the salary amounts shown in the grant budget. The box for "Proprietary and Privileged Information" should be checked on the NSF Form 1207 when the proposal contains confidential budgetary information. This feature also may be accomplished for proposals submitted electronically via FastLane.¹²

b. Fringe Benefits (Line C on NSF Form 1030)

If the grantee's usual accounting practices provide that its contributions to employee benefits (social security, retirement, etc.) be treated as direct costs, NSF grant funds may be requested to defray such expenses as a direct cost, but only in proportion to salaries and wages requested in the budget.

c. Equipment (Line D on NSF Form 1030)

Equipment is defined as an item of property that has an acquisition cost of \$5,000 or more (unless the organization has established lower levels) and an expected service life of more than one year. Items of needed equipment should be listed individually by description and estimated cost, including tax, and adequately justified. Allowable items will ordinarily be limited to research equipment and apparatus not already available for the conduct of the work. General purpose equipment, such as a personal computer, is not eligible for support unless primarily or exclusively used in the actual conduct of scientific research. (See Section II.D.7.f.(iv).)

d. Travel (Line E on NSF Form 1030)

(i) General

Travel and its relation to the proposed activities should be specified. Funds may be requested for field work, attendance at meetings and conferences, and other travel associated with the proposed work, including subsistence. In order to qualify for support, however, attendance at meetings or conferences must enhance the PI's ability to perform the work, plan extensions of it, or disseminate its results.

Allowance for air travel normally will not exceed the cost of round-trip, economy air fares. (See also GPM Section 614.) Persons traveling under NSF grants must travel by US-flag carriers, if available.

(ii) Domestic Travel

For budget purposes, domestic travel includes travel in the US, its possessions, Puerto Rico, and travel to Canada and Mexico.

(iii) Foreign Travel

For budget purposes, travel outside the areas specified above is considered foreign. The proposal should include relevant information, including countries to be visited (also enter names of countries on the NSF Form 1030) dates of visit, if known, and justification for any foreign travel planned in connection with the project.

Travel support for dependents of key project personnel may be requested only when **all** of the following conditions apply:

- a. the individual is a key person who is essential to the research on a full-time basis;
- b. the individual's residence away from home and in a foreign country is for a continuous period of six months or more and is essential to the effective performance of the project; and
- c. the dependent's travel allowance is consistent with the policies of the organization administering the grant.

e. Participant Support (Line F on NSF Form 1030)

This budget category refers to costs of transportation, per diem, stipends and other related costs for participants or trainees (but not employees) in connection with NSF-sponsored conferences, meetings, symposia, training activities and workshops. (See Section V.B.) Generally, indirect costs (F&A) are not allowed on participant support costs. The number of participants to be supported should be entered in the parentheses on the NSF Form 1030. These costs should also be justified in the budget justification section of the proposal.

f. Other Direct Costs (Lines G1 through 6 on NSF Form 1030)

Any costs charged to an NSF grant must be reasonable and directly allocable to the supported activity. The budget should identify and itemize other anticipated direct costs not included under the headings above, including materials and supplies, publication costs, computer services and consultant services. Examples include aircraft rental, space rental at research establishments away from the grantee organization, minor building alterations, payments to human subjects, service charges, tuition remission, and construction of equipment or systems not available off the shelf. Reference books and periodicals may be charged to the grant only if they specifically relate to the project.

(i) Materials and Supplies (Line G1 on NSF Form 1030)

The budget should indicate the general types of expendable materials and supplies required, with their estimated costs. The breakdown should be more detailed when the cost is substantial.

¹² See FastLane proposal preparation instructions at: <https://www.fastlane.nsf.gov/a1/newstan.htm> for further instructions.

**(ii) Publication/Documentation/Dissemination
(Line G2 on NSF Form 1030)**

The budget may request funds for the costs of documenting, preparing, publishing or otherwise making available to others the findings and products of the work conducted under the grant. This generally includes the following types of activities: reports, reprints, page charges or other journal costs (except costs for prior or early publication); necessary illustrations; cleanup, documentation, storage and indexing of data and data bases; development, documentation and debugging of software; and storage, preservation, documentation, indexing, etc., of physical specimens, collections or fabricated items.

(iii) Consultant Services (Line G3 on NSF Form 1030)

Anticipated consultant services should be justified and information furnished on each individual's expertise, primary organizational affiliation, normal daily compensation rate, and number of days of expected service. Consultants' travel costs, including subsistence, may also be included. Payment for a consultant's services, exclusive of expenses, may not exceed the consultant's normal rate or the daily maximum rate established annually by NSF, whichever is less.¹³

(iv) Computer Services (Line G4 on NSF Form 1030)

The cost of computer services, including computer-based retrieval of scientific, technical and educational information, may be requested. A justification based on the established computer service rates at the proposing organization should be included. (See also Partnerships for Advanced Computational Infrastructure in Section V.J.) The budget also may request costs, which must be shown to be reasonable, for leasing of automated data processing equipment. Special purpose computers or associated hardware and software, other than general purpose PCs, should be requested as items of equipment and justified in terms of their necessity for the activity proposed.

(v) Subawards¹⁴ (Line G5 on NSF Form 1030)

Except for the procurement of such items as commercially available supplies, materials, equipment or general support services allowable under the grant, no significant part of the research or substantive effort under an NSF grant may be contracted or otherwise transferred to another organization without prior NSF authorization. The intent to enter into such arrangements should be disclosed in the proposal. At a minimum, the disclosure shall include a clear description of the work to be performed, the basis for selection of the subawardee (except for collaborative/joint arrangements), and a separate budget in the prescribed NSF format for each subaward, signed by an authorized representative of the organization receiving the subaward. Collaborative/joint arrangements may include closely related and coordinated activities at another organization; a joint activity by several organizations or a consortium; group proposals from multi-

¹³ The current maximum consultant daily rate is available at: <http://www.nsf.gov/bfa/cpo/policy/ques.htm>.

¹⁴ The term "subaward" also includes contracts, subcontracts and other arrangements.

ple organizations, etc. The total amount for proposed subawards, not included elsewhere, should be entered on Line G5 in the *Summary Proposal Budget* for the project. For proposals submitted via FastLane, budgets signed by the authorized organizational representative of the subawardee organization must be forwarded to the proposing organization and accompany the signed Proposal Cover Sheet (NSF Form 1207).

g. Total Direct Costs (Line H on NSF Form 1030)

The total amount of direct costs requested by the proposer, to include Lines A through G, should be entered on Line H.

h. Indirect Costs (also known as Facilities and Administrative Costs (F&A) for Colleges and Universities) (Line I on NSF Form 1030)

The applicable indirect cost rate(s) negotiated by the organization with the cognizant Federal negotiating agency must be used in computing indirect costs (F&A) for a proposal. If an organization has no established indirect cost rate, it should contact the Cost Analysis/Audit Resolution Branch of NSF's Division of Contracts, Policy and Oversight. An organization may obtain guidelines for submitting rate proposals from that Branch, telephone (703) 306-1244. These guidelines also are available electronically at the following Web site: "<http://www.nsf.gov/bfa/cpo/oversite/indirect.htm>".

Within Government guidelines, unless otherwise indicated in a specific program announcement, it is NSF policy that grantees are entitled to reimbursement from grant funds for indirect costs (F&A) allocable to the NSF share of allowable direct costs of a project, except grants:

- ❖ solely for the support of travel, equipment, construction of facilities, or doctoral dissertations;
- ❖ for participant support costs;
- ❖ to foreign grantees; and
- ❖ to individuals (i.e., Fellowship awards).

i. Total Direct and Indirect Costs (F&A) (Line J on NSF Form 1030)

The total amount of direct and indirect costs (F&A) (sum of Lines H and I) should be entered on Line J.

j. Residual Funds (Line K on NSF Form 1030)

This line is used **only** for budgets for incremental funding requests on continuing grants. Grantees should provide a rationale for residual funds in excess of 20% as part of the annual project report.

k. Amount of This Request (Line L on NSF Form 1030)

The total amount of funds requested by the proposer will be the same as the amount entered on Line J unless the Foundation disapproves the carry-over of residual funds. If disapproved, Line L will be equal to Line J minus Line K.

l. Cost Sharing (Line M on NSF Form 1030)

In accordance with Congressional requirements (see GPM 330), NSF requires that each grantee share in the cost of research projects resulting from unsolicited proposals. The grantee may meet the statutory cost sharing requirement by choosing either of two alternatives:

1. by cost sharing a minimum of one percent on the project; or
2. by cost sharing a minimum of one percent on the aggregate costs of all NSF-supported projects requiring cost sharing.

The statutory cost sharing referenced above is not required for grants that provide funds solely for the following purposes (not considered to be support of "research"), although such awards may be subject to other cost sharing requirements identified in a specific announcement:

1. international travel;
2. construction, improvement or operation of facilities;
3. acquisition of research equipment;
4. ship operations;
5. education and training;
6. publication, distribution and translation of scientific data and information;
7. symposia, conferences and workshops; and
8. special studies authorized or required by Subsections 3a(5) through 3a(7) of the NSF Act, as amended.

The minimum one percent statutory cost sharing requirement discussed above need NOT be entered on Line M of the NSF Form 1030. Proposers, however, should include on Line M any significant cost sharing that exceeds the statutorily required (1%) amount, especially if it is the proposer's intent that it be taken into consideration in the merit review of the proposal. Since such volunteered cost sharing may be a consideration in NSF's decision to fund the proposal, such voluntary cost sharing will become a condition of the award.

The estimated value of any in-kind contributions should be included on Line M. An explanation of the source, nature, amount and availability of any proposed cost sharing should also be provided in the budget justification.¹⁵ It should be noted that contributions counted as cost sharing toward projects of another Federal agency may not be counted towards meeting the specific cost sharing requirements of the NSF grant. All cost sharing amounts are subject to audit. Failure to provide the level of cost sharing reflected in the approved grant budget may result in termination of the NSF grant, disallowance of grant costs and/or refund of grant funds to NSF.

m. Unallowable Costs

Proposers should be familiar with the complete list of unallowable costs that is contained in the applicable cost princi

¹⁵ Section .23 of OMB Circular A-110 prescribes criteria and procedures for the allowability of cash and in-kind contributions in satisfying cost sharing and matching requirements.

ples. Because of their sensitivity, the following categories of unallowable costs are highlighted:

(i) Entertainment

Costs of entertainment, amusement, diversion and social activities and any costs directly associated with such activities (such as tickets to shows or sports events, meals, lodging, rentals, transportation and gratuities) are unallowable. Expenses of grantee employees who are not on travel status are unallowable. This includes cases where they serve as hosts or otherwise participate at meals that are primarily social occasions involving speakers or consultants. Costs of employees on travel status are limited to those allowed under the governing cost principles for travel expenses. (See GPM Section 614.)

(ii) Meals and Coffee Breaks

No NSF funds may be spent on meals or coffee breaks for intramural meetings of an organization or any of its components, including, but not limited to, laboratories, departments and centers.

(iii) Alcoholic Beverages

No NSF funds may be spent on alcoholic beverages.

8. Current and Pending Support -- Proposal Section G

A model format to provide *Current and Pending Support* information (NSF Form 1239) is shown in the *Proposal Forms Kit*. Use of this format is optional; however, the categories of information included on the NSF Form 1239 must be provided. This section of the proposal calls for required information on all current and pending support for ongoing projects and proposals, including subsequent funding in the case of continuing grants. All current project support from whatever source (e.g., Federal, State or local government agencies, private foundations, industrial or other commercial organizations) must be listed. The proposed project and all other projects or activities requiring a portion of time of the PI and other senior personnel should be included, even if they receive no salary support from the project(s). The total award amount for the entire award period covered (including indirect costs) should be shown as well as the number of person-months per year to be devoted to the project, regardless of source of support. Similar information must be provided for all proposals already submitted or submitted concurrently to other possible sponsors, including NSF.

If the project now being submitted has been funded previously by a source other than NSF, the information requested in the paragraph above should be furnished for the last period of funding.

If the proposal is also being submitted to other possible sponsors, all of them must be listed. Concurrent submission of a proposal to other organizations will not prejudice its review by NSF. Note the Biological Sciences Directorate exception to this policy identified on page 1.

9. Facilities, Equipment and Other Resources -- Proposal Section H

A model format to provide *Facilities, Equipment and Other Resources* information (NSF Form 1363), is included in the *Proposal Forms Kit*. Use of this format is optional. This section of the proposal is used to assess the adequacy of the organizational resources available to perform the effort proposed. Proposers should describe only those resources that are directly applicable.

10. Special Information and Supplementary Documentation -- Proposal Section I

Except as specified below, special information and supplementary documentation should be part of the 15-page Project Description (or part of the budget justification) if it is relevant to determining the quality of the proposed work. Information in the following areas should be included in Section I and not counted as part of the 15-page Project Description limitation. This Special Information and Supplementary Documentation Section is not considered an appendix. Specific guidance on the need for additional documentation may be obtained from the organization's sponsored projects office or in the references cited below.

- ❖ Rationale for performance of all or part of the project off-campus or away from organizational headquarters. (GPM Section 633)
- ❖ Documentation of collaborative arrangements of significance to the proposal through letters of commitment. (GPG II.D.4)
- ❖ Environmental impact statement for activities that have an actual or potential impact on the environment. (GPM Section 830) Where applicable, the box for "National Environmental Policy Act" should be checked on the NSF Form 1207.
- ❖ Work in foreign countries. Some governments require nonresidents to obtain official approval to carry out investigations within their borders and coastal waters under their jurisdiction. PIs are responsible for obtaining the required authorizations and for advising NSF that they have been obtained or requested. Advance coordination should minimize disruption of the research. (GPM Section 763)
- ❖ Research in the Antarctic and Greenland. (Contact the NSF Office of Polar Programs (OPP) for additional information; see Appendix A for phone numbers.)
- ❖ Research in a location designated, or eligible to be designated, a registered historic place. (GPM Section 840) Where applicable, the box for "Historic Places" should be checked on the NSF Form 1207.
- ❖ Research involving field experiments with genetically engineered organisms. (GPM Section 712)
- ❖ Research involving the use of human subjects, hazardous materials, vertebrate animals, or endangered species. (GPM Section 710, GPG II.D.12.d and e)
- ❖ Projects that involve technology utilization/transfer activities, that require a management plan, or that involve special reports or final products.
- ❖ Projects containing a special component, such as Facilitation Awards for Scientists and Engineers with Disabilities or Research Opportunity Awards. (GPG V.G. and H.)
- ❖ *Research in Undergraduate Institutions*. (See program announcement for information.)

In addition, Section I should alert NSF officials to unusual circumstances that require special handling, including, for example, proprietary or other privileged information in the proposal, matters affecting individual privacy, required intergovernmental review under E.O. 12372 (*Intergovernmental Review of Federal Programs*) for activities that directly affect State or local governments, or possible national security implications.

For proposals submitted via FastLane, special information or supplementary documentation should be included at the end of the Project Description Portable Document Format (PDF) file.¹⁶

11. Appendices -- Proposal Section J

All information necessary for the review of a proposal should be contained in Sections A through I of the proposal. **Appendices may not be included unless a deviation has been authorized.** Section II.A. contains information on deviations.

12. Special Guidelines

a. Small Grants for Exploratory Research (SGER)

Proposals (only one copy required) for small-scale, exploratory, high-risk research in the fields of science, engineering and education normally supported by NSF may be submitted to individual programs. Such research is characterized as:

- ❖ preliminary work on untested and novel ideas;
- ❖ ventures into emerging research ideas;
- ❖ application of new expertise or new approaches to "established" research topics;
- ❖ having a severe urgency with regard to availability of, or access to data, facilities or specialized equipment, including quick-response research on natural disasters and similar unanticipated events; or
- ❖ efforts of similar character likely to catalyze rapid and innovative advances.

Investigators are **strongly encouraged** to contact the NSF program(s) most germane to the proposal topic before submitting an SGER proposal. This will facilitate determining whether the proposed work meets the guidelines described above and availability and appropriateness for SGER funding, or whether the work is more appropriate for submission as a fully reviewed proposal. (See Appendix A for programs.) SGER proposals may be submitted electronically via FastLane.

The project description should be brief (two to five pages) and include clear statements as to why the proposed research should be considered particularly exploratory and high risk, the nature and significance of its potential impact on the field and why an SGER grant would be a suitable means of supporting the work.

Brief biographical information is required for the PI and co-PI(s) only, and should list no more than five significant pub-

¹⁶ See the FastLane Web site at: <https://www.fastlane.nsf.gov/a1/newstan.htm> for further instructions.

lications or other research products. The box for "Small Grant for Exploratory Research" should be checked on the Cover Sheet, NSF Form 1207.

These proposals will be subject to internal NSF merit review only. Renewed funding of SGER awards may be requested only through submission of a non-SGER proposal, which will be subject to full merit review.

Under a three-year experiment, effective until October 1, 2000, the maximum SGER award amount will not exceed \$100,000. Although the maximum award amount is \$100,000, the award amount usually will be substantially less than a given program's average award amount. The project's duration will normally be one year, but may be up to two years.

For participating directorates and at the discretion of the Program Officer, with the concurrence of the Division Director, a small fraction of especially promising SGER awards may be extended for a period of six additional months and supplemented with up to \$50,000 in additional funding.¹⁷ The SGER award extensions will be possible for awards of two-year initial duration as well as for those of shorter initial duration. Requests for extensions should be submitted one to two months before the expiration date of the initial award. A project report and outline of proposed research, not to exceed five pages, should be included.

b. Group and Collaborative Proposals

A group proposal is a proposal that is submitted by three or more investigators and combines into one administrative mechanism several projects that ordinarily would be funded separately. A single individual bears primary responsibility for the administration of the grant and discussions with NSF, although several investigators may be designated as co-PIs. These grants support groups of scientists or engineers who themselves judge that the effectiveness of their work would be enhanced by group funding.

In submission of a group proposal, the organization has determined that the proposed activity is administratively manageable. NSF may request a revised proposal, however, if it considers that the project is so complex that it will be too difficult to review or administer. The box for "Group Proposal" should be checked on the NSF Form 1207. In addition, group proposals should be indicated as such in a cover letter accompanying the proposal and in the project description.

Where multiple organizations are involved in collaborative or joint arrangements, the proposal may be submitted by only one of them. It should clearly describe both the role to be played by the other organizations, specify the managerial arrangements, and explain the advantages of the multi-organizational effort.

PIs wishing to submit group proposals that might exceed the 15-page limitation on the project description should discuss that possibility with the cognizant Program Officer prior to submission. In general, group proposals that contain up to

ten pages of overall project description (including overall progress under the appropriate prior award) plus up to five pages *per person* of individual project descriptions (including description of progress under prior awards) will be acceptable.

In some instances, however, simultaneous submission of related proposals from each organization might be appropriate, in which case parallel awards would be made. In such cases, the project title should begin with the words "Collaborative Research:". For purposes of NSF review and processing, a complete package should be submitted, including the cover sheets for all organizations, biographical sketches for all PIs, statements of current and pending support, and budgets and budget justifications for each organization. One institution must take the lead, submitting the original from that institution plus the required number of copies for use in the review process. The other institution(s) need only submit their original copy to NSF. For proposals submitted via FastLane, the non-lead organization(s) should inform the lead organization of their NSF proposal numbers that are generated by their FastLane submission(s). The lead proposer should then include a list of these collaborative proposal numbers with its signed Cover Sheet (NSF Form 1207).

c. Equipment Proposals

Proposals for specialized equipment may be submitted by an organization for: (1) individual investigators; (2) groups of investigators within the same department; (3) several departments; (4) organization(s) participating in a collaborative or joint arrangement; (5) any components of an organization; or (6) a region. One individual should be designated as PI. Investigators may be working in closely related areas or their research may be multidisciplinary.

Note: Many organizations within NSF have formal instrumentation programs which may include special guidelines such as cost sharing or other requirements. It is important to use the applicable guidelines in these competitions. The appropriate program should be consulted.

Instrumentation and equipment proposals should follow the format of research proposals. Each potential major user should describe the project(s) for which the equipment will be used. These descriptions should be succinct, not necessarily as detailed as in an individual research proposal, and should emphasize the intrinsic merit of the activity and the importance of the equipment to it. A brief summary will suffice for auxiliary users.

Equipment to be purchased, modified or constructed should be described in sufficient detail to allow comparison of its capabilities with the needs of the proposed activities. Equipment proposals should also describe comparable equipment already at the proposing organization(s) and explain why it cannot be used. This includes comparable government-owned equipment that is on-site.

Equipment proposals should discuss arrangements for acquisition, maintenance and operation, including:

¹⁷ The Biological Sciences and Education and Human Resources Directorates will not participate in the extension or supplementation of SGER awards.

- ❖ overall acquisition plan;
- ❖ biographical sketch of the person(s) who will have overall responsibility for maintenance and operation and a brief statement of qualifications, if not obvious;
- ❖ description of the physical facility, including floor plans or other appropriate information, where the equipment will be located;
- ❖ statement of why the equipment is severable or non-severable from the physical facility;
- ❖ annual budget for operation and maintenance of the proposed equipment, indicating source of funds, and particularly related equipment; and
- ❖ brief description of other support services available and the annual budget for their operation, maintenance and administration.

The terms of a grant require that special-purpose equipment purchased or leased with grant funds be subject to reasonable inventory controls, maintenance procedures and organizational policies that enhance its multiple or shared use on other projects, if such use does not interfere with the work for which the equipment was acquired. If the government retains title, those items must be included in the annual inventory submitted to the NSF Property Administrator. Equipment proposals should include the information described above within the 15-page project description.

These proposals normally compete with proposals for research or education projects. For additional information on other NSF opportunities in this area, see Section V.A. on the Major Research Instrumentation Program (MRI).

d. Proposals Involving Vertebrate Animals

For proposals involving the use of vertebrate animals, sufficient information should be provided within the 15-page project description to allow for evaluation of the choice of species, number of animals to be used, and any necessary exposure of animals to discomfort, pain or injury. All projects involving vertebrate animals must have approval from the organization's Institutional Animal Care and Use Committee (IACUC) before issuance of an NSF award. The box for "Vertebrate Animals" should be checked on the NSF Form 1207 with the IACUC approval date (if available) identified in the space provided.

e. Proposals Involving Human Subjects

Projects involving research with human subjects must ensure that subjects are protected from research risks in conformance with the Common Rule (*Federal Policy for the Protection of Human Subjects*, 45 CFR §690). All projects involving human subjects must either: (1) have approval from the organization's Institutional Review Board (IRB) before issuance of an NSF award; or (2) identify the applicable subsection exempting the proposal from IRB review, as established in section 101(b) of the Common Rule. The box for "Human Subjects" should be checked on the NSF Form 1207 with the IRB approval date (if available) or exemption subsection from the Common Rule identified in the space provided.

CHAPTER III

NSF PROPOSAL PROCESSING AND REVIEW

Proposals received by the NSF Proposal Processing Unit are assigned to the appropriate NSF program for acknowledgment and, if they meet NSF requirements, for review. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF who are experts in the particular field represented by the proposal. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Program Officers may obtain comments from assembled review panels or from site visits before recommending final action on proposals. Recommendations for awards are further reviewed by senior NSF staff.

A. REVIEW CRITERIA

The National Science Board approved revised criteria for evaluating proposals at its meeting on March 28, 1997 (NSB 97-72). The criteria are designed to be useful and relevant across NSF's many different programs, however, NSF will employ special criteria as required to highlight the specific objectives of certain programs and activities.

The merit review criteria are listed below. Following each criterion are potential considerations that the reviewer may employ in the evaluation. These are suggestions and not all will apply to any given proposal. Each reviewer will be asked to address only those that are relevant to the proposal and for which he/she is qualified to make judgments.

What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

B. ADMINISTRATIVE CORRECTIONS TO FASTLANE PROPOSALS

NSF recognizes that minor, non-content related errors may occur in proposal development and that these errors may not be discovered until after the proposal submission to NSF. To enable organizations to correct such errors, FastLane will be enhanced to include a 60-minute "grace period," which begins immediately following proposal submission. During this grace period, authorized sponsored projects office personnel will be permitted to make administrative corrections to Cover Sheet (NSF Form 1207) or Budget (NSF Form 1030) data. These corrections **do not** include changes to identified PIs, co-PIs or other senior project personnel. This correction option will be available in FastLane in spring 1999. Detailed instructions for use of this feature will be made available at that time.

C. REVISIONS TO PROPOSALS MADE DURING THE REVIEW PROCESS

In the event of a significant development that might materially affect the outcome of the review of a pending proposal, the proposer should contact the Program Officer to whom the proposal is assigned to discuss the finding or changed circumstances. Submitting additional information must not be used as a means of circumventing page limitations or stated deadlines, but is intended to provide an opportunity to communicate unexpected and significant developments.

Before recommending whether or not NSF should support a particular project, the NSF Program Officer may, subject to certain constraints outlined below, engage in discussions with the proposing PIs.

Negotiating budgets generally involves discussing a lower or higher amount of total support for the proposed project. The NSF Program Officer may suggest reducing or eliminating costs for specific budget items that are clearly unnecessary or unreasonable for the activities to be undertaken, especially when the review process supports such changes; however, this would generally not include faculty salaries, salary rates, fringe benefits, or tuition. Note: indirect cost rates are not subject to negotiation. NSF Program Officers may discuss with PIs the "bottom line" award amount, i.e., the total NSF funding that will be recommended for a project. NSF Program Officers may not renegotiate cost sharing or other institutional commitments.

When such discussions result in significant changes in the basic objectives or scope of the project as originally proposed, an appropriate proposal modification (which may include a revised proposal budget) signed by the PI and the Authorized Organizational Representative must be submitted to the NSF Program Officer. By signing and submitting this modification to the proposal, the PI and AOR are certifying to the accuracy and completeness of the information provided.

D. AWARD RECOMMENDATION

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. Normally, final programmatic approval is at the division level.¹⁸ Because of the large volume of proposals, this review and consideration process may take up to six months. Large or particularly complex proposals may require additional review and processing time. If the program recommendation is for an award and final division or other programmatic approval is obtained, then the recommendation goes to the Division of Grants and Agreements for review of business, financial and policy implications and the processing and issuance of a grant or other agreement. The Division of Grants and Agreements generally makes awards to academic institutions within 30 days after the program division makes its recommendation. Grants being made to organizations that have not received an NSF award within the preceding two years, or involving special situations (such as coordination with another Federal agency or a private funding source), cooperative agreements, and other unusual arrangements may require additional review and processing time.

Proposers are cautioned that only an appointed Grants Officer in the Division of Grants and Agreements may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF or the Government should be inferred from technical or budgetary discussions with an NSF Program Officer. A PI or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants Officer does so at its own risk.

E. COPIES OF REVIEWS

When a decision has been made (whether an award or a declination), verbatim copies of reviews, excluding the names of the reviewers, and summaries of review panel deliberations, if any, are provided to the PI. Proposers may also request and obtain any other releasable material in NSF's file on their proposal. Everything in the file except information that directly identifies either reviewers or other pending or declined proposals is usually releasable to the proposer.

¹⁸ Recommended awards of \$3,000,000 per year or \$15,000,000 over the life of the award must be reviewed and approved by the National Science Board.

CHAPTER IV

WITHDRAWALS, RETURNS & DECLINATIONS

A. WITHDRAWALS

A proposal may be withdrawn at any time before a final decision is made. A request for withdrawal must be signed by both the PI and the Authorized Organizational Representative. Confirmation of withdrawal requests will be sent by NSF. NSF must be notified if any funding for the proposed project is received from another source or sponsor. If it is brought to NSF's attention that funding for a proposal to NSF has been accepted from another sponsor, NSF will send a withdrawal confirmation letter to the PI and the Authorized Organizational Representative without waiting for the official withdrawal request.

NSF does not normally return the copies of withdrawn proposals to the proposer but does retain a file copy. Copies of reviews received by NSF before a proposal is withdrawn will be provided to the PI.

NSF provides copies of withdrawal, return, declination, reconsideration or resubmission information to both the PI and the Authorized Organizational Representative.

B. RETURNS

Proposals may not be considered for review by NSF for the following reasons: (1) inappropriate for NSF funding; (2) submitted with insufficient lead time before activity is to begin; (3) does not meet NSF requirements for proposal content, format, etc.; (4) does not meet announced proposal deadline date requirements; (5) the proposal was previously reviewed and declined and has not been substantially revised; or (6) the proposal is a duplicate of or substantially similar to a proposal already under consideration by NSF.

C. DECLINATIONS

A PI whose proposal for NSF support has been declined generally will receive information and an explanation of the reasons for declination along with copies of the reviews considered in making the decision. If that explanation does not satisfy the PI, he/she may request additional information from the cognizant Program Officer.

D. RECONSIDERATION

If the explanation provided does not satisfy the PI, he/she may request that the cognizant NSF Assistant Director or Office Head reconsider the action to determine whether the proposal received a fair and reasonable review, both substantively and procedurally. A PI whose proposal has not been accepted because it is inappropriate for consideration by NSF may also request reconsideration of this determination. The request for reconsideration must be in writing and must be received within 90 days after the date of the declination letter or return. If the proposing organization is still not satisfied after reconsideration by the responsible Assistant Director/Office Head, it may, within 60 days after the determination by the Assistant Director/Office Head, request further reconsideration by the NSF Deputy Director. Consult GPM Section 900 for additional information on the NSF reconsideration process.

E. RESUBMISSION

A declined proposal may be resubmitted, but only after it has undergone substantial revision. Resubmittals that have not clearly taken into account the major comments or concerns resulting from the prior NSF review may be returned without further review. The Foundation will treat the revised proposal as a new proposal, subject to the standard review procedures.

CHAPTER V

SPECIAL PROGRAMS

A. RESEARCH INSTRUMENTATION/FACILITIES

The Major Research Instrumentation Program (MRI) assists in the acquisition or development of major research instrumentation by US institutions that is, in general, too costly for support through other NSF programs. The MRI program is designed to improve the condition of scientific and engineering equipment for research and research training in our Nation's academic institutions. This program seeks to improve the quality and expand the scope of research and research training in science and engineering, and to foster the integration of research and education by providing instrumentation for research-intensive learning environments. For more information, see the program solicitation or contact the Office of Integrative Activities. (See Appendix A.)

In addition, NSF occasionally provides assistance for the acquisition of specialized facilities. Examples include supercomputers, oceanographic research vessels, polar research facilities and national astronomy centers.

All NSF programs will consider proposals that include funds for facility construction, renovation or improvements where required for the proposed research, in competition with other proposals received. It is, however, NSF policy that the principal responsibility for providing facilities for research and education rests with the proposing organizations. Preliminary inquiry should be made before preparing a formal proposal. (See Section VII.D for additional information on equipment.)

B. CONFERENCES, SYMPOSIA AND WORKSHOPS

NSF supports conferences, symposia and workshops in special areas of science and engineering that bring experts together to discuss recent research or education findings or to expose other researchers or students to new research and education techniques. NSF encourages the convening in the US of major international conferences and unions. Conferences will be supported only if equivalent results cannot be obtained at regular meetings of professional societies. Although requests for support of conferences, symposia and workshops ordinarily originate with educational institutions or scientific societies, they may also come from other groups. Shared support by several Federal agencies, States or private organizations is encouraged. Because proceedings of such conferences normally should be published in professional journals, requests for support may include publication costs. Requests should generally be made at least a year in advance of the scheduled date. Conferences or meetings, including the facilities in which they are held, funded in whole or in part with NSF funds, must be accessible to participants with disabilities.

A conference, symposium or workshop proposal (that complies with the page and font size instructions in Section II.C) must be assembled in the following sequence:

- ❖ *Cover Sheet for Proposal to the National Science Foundation* (NSF Form 1207)
- ❖ Summary of one page or less indicating the objectives of the project.

- ❖ Statement of the need for such a gathering and a list of topics.
- ❖ Recent meetings on the same subject, including dates and locations.
- ❖ Names of the chairperson and members of organizing committees and their organizational affiliations.
- ❖ Information on the location and probable date(s) of the meeting and the method of announcement or invitation.
- ❖ Statement of how the meeting will be organized and conducted, how the results of the meeting will be disseminated and how the meeting will contribute to the enhancement and improvement of scientific, engineering and/or educational activities.
- ❖ Estimated total budget for the conference, together with an itemized statement of the amount of support requested from NSF. The budget may include participant support for transportation (when appropriate), per diem costs, stipends, publication and other conference-related costs. Participant support costs must be excluded from the indirect cost base. (See Section II.D.7.e.) (NSF Form 1030, *Summary Proposal Budget*, should be used to submit the budgetary information.)
- ❖ Support requested or available from other Federal agencies and other sources. (NSF Form 1239, *Current and Pending Support*, may be used to submit this information.)

For additional coverage on allowability of costs associated with meetings and conferences, proposers should consult GPM Section 625.

C. INTERNATIONAL COOPERATIVE ACTIVITIES

In addition to the international projects funded and managed by the disciplinary directorates, the Division of International Programs provides support for bilateral and regional cooperative science and engineering projects to foster and facilitate cooperation between US investigators and their foreign colleagues in joint activities of mutual interest and benefit. Grants may be made for the US portion of the costs of the initial phases of cooperative research, joint seminars and workshops, planning visits, programs to enhance the international perspectives of the next generation of US scientists and engineers, and for fellowships, summer programs and research participation. Information on proposal requirements and award selection procedures is contained in the Program Announcement of the Division of International Programs. The box for "International Cooperative Activities" should be checked and the countries identified on the NSF Form 1207. (For telephone numbers and program contacts by region, see Appendix A, under listings for SBE Directorate.) The program announcement is available electronically on the Division of International Programs Web site at: "<http://www.nsf.gov/sbe/int/9614rev.htm>".

D. INTERNATIONAL TRAVEL GRANTS

Proposals for travel support for US participation in international scientific and engineering meetings held abroad are handled by the NSF organizational unit with program responsibility for the area of research interest.

Group travel awards are encouraged as the primary means of support for international travel. A university, professional society or other non-profit organization may apply for funds to enable it to coordinate and support US participation in one or more international scientific meeting(s) abroad. Group travel grants may include as compensation for the grantee a flat rate of \$50 per traveler for general administrative costs of preparing announcements, evaluating proposals and handling travel arrangements customarily associated with this type of project. (See GPM Section 765.) Group travel grantees are required to retain supporting documentation that funds were spent in accordance with the original intent of the proposal. Such documentation may be required in final reports and is subject to audit.

E. DOCTORAL DISSERTATION RESEARCH

NSF awards grants in support of doctoral dissertation research in some disciplines, primarily field research in the environmental, behavioral and social sciences. Support may be sought through those disciplinary programs and, in cases involving research abroad, through the Division of International Programs. Proposals are submitted by the thesis advisor or concerned faculty member on behalf of the graduate student. Further information can be obtained from the cognizant program office.

F. HUMAN RESOURCES DEVELOPMENT

The Foundation supports a range of activities to increase participation by women, minorities, persons with disabilities and by faculty from minority institutions and predominantly undergraduate institutions. Programs that have a strong focus on underrepresented communities are:

- ❖ Professional Opportunities for Women in Research and Education
- ❖ Research Planning Grants and Career Advancement Awards for Minority Scientists and Engineers
- ❖ Program for Persons with Disabilities
- ❖ Centers for Research Excellence in Science and Technology
- ❖ Alliances for Minority Participation
- ❖ Research Opportunity Awards
- ❖ Facilitation Awards for Scientists and Engineers with Disabilities
- ❖ Faculty Early Career Development
- ❖ Comprehensive Partnerships for Mathematics and Science Achievement
- ❖ Presidential Awards for Excellence in Science, Mathematics and Engineering Mentoring
- ❖ Program for Women and Girls (K-16)
- ❖ Model Institutions for Excellence
- ❖ Minority Postdoctoral Research Fellowships and Supporting Activities in Biological, Social, Behavioral & Economic Sciences
- ❖ Minority Graduate Education
- ❖ Initiative for Historically Black Colleges & Universities

In some cases, additional information may be required as part of a proposal. Program announcements describing these activities are available on the NSF Web site at: <http://www.nsf.gov> or from the NSF Clearinghouse. General information may be obtained from the NSF Information Center at (703) 306-1234.

G. FACILITATION AWARDS FOR SCIENTISTS AND ENGINEERS WITH DISABILITIES

Facilitation Awards for Scientists and Engineers with Disabilities encourage participation in NSF programs by scientists and engineers (investigators or other staff, postdoctoral associates, student research assistants, and awardees and honorable mention recipients for Graduate Fellowships) with disabilities. This effort provides funds for equipment or assistance specifically required for performance of research on a NSF-supported project. Requests for support may be included in new proposals submitted to any NSF program or in requests for supplements to existing grants. The box for "Facilitation for Scientists/Engineers with Disabilities" should be checked on the NSF Form 1207.

H. RESEARCH OPPORTUNITY AWARDS (ROAs)

A faculty member at an organization with limited research opportunities may arrange to work with a PI at another organization who holds or is applying for an NSF research grant. If supplemental funds are required to cover additional costs, the PI should make preliminary contact with the cognizant Program Officer. The formal ROA request letter, endorsed by the organization and addressed to the program office, should be received at least three months before funds will be needed. It must include: a description of the arrangements and the work to be performed by the ROA visitor, a statement of the contribution of this work to the NSF project and to the visitor's future research and home organization, a budget (NSF Form 1030) with appropriate explanatory information; a biographical sketch of the visitor, and any additional information specified by the Program Officer. The box for "Research Opportunity Award" should be checked on the NSF Form 1207. (See the *Research in Undergraduate Institutions* program announcement for further details.)

I. RESEARCH EXPERIENCES FOR UNDERGRADUATES (REUs)

REUs provide opportunities for talented undergraduate students to participate in active research in mathematics, science and engineering. Awards are of two types:

- ❖ *Sites* — grants to initiate and support undergraduate research participation sites. These projects could be carried out during the summer months, the academic year or both. NSF expects that an appropriate number of students will be involved, and proposals involving fewer than four to six students are discouraged.
- ❖ *Supplements* — to ongoing NSF research grants provide research training experiences for one or two additional undergraduates. Funds will normally be available for up to two students, but exceptions will be considered for training additional minority and women students and students with disabilities.

See the program announcement for more information.

J. PARTNERSHIPS FOR ADVANCED COMPUTATIONAL INFRASTRUCTURE (PACI)

NSF supports two Partnerships for Advanced Computational Infrastructure that provide access to a variety of high performance computing platforms. These include parallel and vector supercomputers, visualization facilities and data storage capabilities. User access is available at the leading edge sites of the Partnerships and at some of the partner institutions. Major requests for allocations are reviewed by a national committee of computational scientists which meets twice a year. Smaller, local allocations are handled by each Partnership on a quarterly basis. For more information on PACI resources, and how to obtain an allocation see "<http://www.npaci.edu>".

K. SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM

The Small Business Innovation Research Program is a highly competitive three-phase process that provides eligible small businesses with opportunities to propose innovative ideas that meet specific research and development (R&D) needs of the Federal Government. Phase I is a six-month effort to determine the scientific, technical and commercial merit and feasibility of the proposed concept or idea, and establishes the eligibility for Phase II. Phase II is a two-year effort that further

develops the proposed concept and demonstrates the potential for commercialization. Phase III is the commercialization phase and is funded by non-SBIR sources, normally from the private sector. For more detailed information regarding the SBIR Program, proposers should consult the NSF SBIR solicitation.

L. SMALL BUSINESS TECHNOLOGY TRANSFER (STTR) PROGRAM

The Small Business Technology Transfer Program is a pilot program encouraging technology transfer through jointly conducted research between small business concerns and non-profit research organizations. The program follows the same three-phase process as the SBIR Program. Proposals must be submitted by the small business, and the proposed effort must be responsive to the program focus described in the annual STTR Program solicitation. Phase I is a 12-month effort to determine the scientific, technical and commercial merit and feasibility of the proposed concept or idea, and establishes the eligibility for Phase II. Phase II is a 24-month effort that further develops the proposed concept and demonstrates the potential for commercialization. Phase III is to pursue commercialization from the Government-funded research with non-STTR funds, primarily from the private sector. For more detailed information regarding the STTR Program, proposers should consult the NSF STTR solicitation.

CHAPTER VI

AWARD & CONTINUED SUPPORT

A. STANDARD AND CONTINUING GRANTS

NSF awards two types of grants:

Standard Grants, in which NSF agrees to provide a specific level of support for a specified period of time with no statement of NSF intent to provide additional future support without submission of another proposal, and

Continuing Grants, in which NSF agrees to provide a specific level of support for an initial specified period of time, usually a year, with a statement of intent to provide additional support of the project for additional periods, provided funds are available and the results achieved warrant further support.

Notification of an NSF grant is by a letter signed by an NSF Grants Officer, addressed to the Grantee Organization. An NSF grant consists of: (1) the award letter, which includes any special provisions applicable to the grant and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable grant conditions,¹⁹ such as Grant General Conditions (NSF GC-1) or Federal Demonstration Partnership (FDP) Terms and Conditions and (5) any NSF brochure, program guide, announcement or other NSF issuance that may be incorporated by reference in the award letter. Electronic mail notification is the preferred way to transmit NSF grants to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

Effective/Expiration Dates and Preaward Costs. The grant period begins on the effective date specified in the award letter or, in its absence, the date of the award letter and runs until the expiration date indicated. Expenditures incurred within the 90-day period preceding the effective date of the grant may be authorized by the grantee organization. Such expenditures, however, are made at the grantee's risk. Expenditures after the scheduled expiration date of the grant may be made only to honor documented commitments made on or before the expiration date. PIs should consult their business offices for details.

B. ADDITIONAL SUPPORT

1. Incremental Funding

Incremental funding for continuing grants within the total duration of the project is based on NSF review of project reports and does not require submission of a new proposal. For each increment, an annual project report addressed to the cognizant

¹⁹ Additional coverage on the NSF grant conditions (e.g., GC-1 and FDP) is contained in GPM Section 240. These conditions are also available at grantee organization sponsored projects offices as well as on the NSF Web site at: "<http://www.nsf.gov>".

program office, with a copy to the Authorized Organizational Representative, must be received by NSF at least three months before the end of the period currently being funded. For information on the new NSF electronic reporting system for submission of project reporting information, see Section VII.G.1.

2. Renewal Proposals

Renewal proposals are requests for additional funding for a support period subsequent to that provided by a standard or continuing grant. Renewal proposals compete with all other pending proposals and should be submitted at least six months before additional funding is required or consistent with an established deadline or target date. In preparing a renewal proposal, proposers should assume that reviewers will not have access to previous proposals.

All proposals for renewed support of research projects from academic institutions *only* must include, as part of Results from Prior NSF Support, information about any contribution of the completed project to the education and development of human resources in science and engineering at the postdoctoral, graduate and undergraduate levels.²⁰ Non-academic organizations are exempt from this requirement. (See Section II.D.4. for more information.)

PIs are encouraged to discuss renewal proposals with the Program prior to submission of a proposal. Unless precluded by individual program requirements, PIs can choose either of two formats for a renewal proposal:

❖ **Traditional Renewal.** The "traditional" renewal proposal is developed as fully as though the proposer were applying for the first time. It covers all the information required in a proposal for a new project, including results from the prior work. The 15-page limitation on the project description applies.

❖ **Accomplishment-Based Renewal.** In an "Accomplishment-Based Renewal" (ABR) proposal, the project description is replaced by copies of no more than six reprints of publications resulting from the research supported by NSF (including research supported by other sources that is closely related to the NSF-supported research) during the preceding three to five year period. Of the six publications, two preprints (accepted for publication) may be included. In addition, a brief summary (not to exceed four pages) of plans for the proposed support period must be submitted. All other information required for NSF proposal submission remains the same. It must be clearly indicated in the proposal and the box for "Accomplishment-Based Renewal" should be checked on the NSF Form 1207.

²⁰ This requirement also applies to renewal proposals submitted in the accomplishment-based renewal format.

ABR proposals may not be submitted for consecutive renewals.

3. Two-Year Extensions for Special Creativity

A Program Officer may recommend the extension of funding for certain research grants beyond the initial period for which the grant was awarded. The objective of such extensions is to offer the most creative investigators an extended opportunity to attack adventurous, "high-risk" opportunities in the same general research area, but not necessarily covered by the original/current proposal. Awards eligible for such an extension are generally three-year continuing grants.

Special Creativity Extensions are initiated by the NSF Program Officer based on progress during the first two years of a three-year grant; PIs will be informed of such action a year in advance of the expiration of the grant.

4. Supplemental Funding

In unusual circumstances, small amounts of supplemental funding and up to six months of additional support may be requested to assure adequate completion of the original scope of work. The grantee may submit a request for supplemental funding to the cognizant NSF Program Officer at least two months before funds are needed. Program Officers may make decisions regarding whether or not to recommend a small supplement without merit review of the supplemental request. Requests for larger supplements may require merit review. Such requests should include a brief justification and a budget signed by the PI and the Authorized Organizational Representative. Supplemental funding requests will not be approved for such purposes as defraying costs associated with increases in salaries or additional indirect cost reimbursement. Grantees should contact the cognizant Program Officer prior to submitting a request for supplemental funding. (See GPM 264 for additional information on Supplemental Funding requests.)

In addition, limited supplemental funds are available for special NSF programs, such as *Facilitation Awards for Scientists and Engineers with Disabilities*, *Research Opportunity Awards*, and *Research Experiences for Undergraduates*. (See Sections V.G–I and the appropriate program brochures.)

C. NO-COST EXTENSIONS

1. Grantee-Authorized Extension

Grantees may authorize a one-time extension of the expiration date of the grant of up to 12 months if additional time beyond the established expiration date is required to assure adequate completion of the original scope of work within the funds already made available. This one-time extension may not be exercised merely for the purpose of using the unliquidated balances. The grantee shall notify the NSF Grants Officer in writing, providing supporting reasons for the extension and the revised expiration date, at least ten days prior to the expiration date specified in the grant to ensure accuracy of NSF's grant data. For extensions provided by organizations, no amendment will be issued. Grantees are **strongly encouraged** to use FastLane to transmit their no-cost extension notifications to NSF. FastLane submission provides real-time data accuracy for grantees and NSF. Please note that some NSF Directorates **require** electronic submission of notification of grantee-authorized extensions via FastLane. Please check the cognizant Directorate or FastLane Web site to see if submission via FastLane is required.

2. NSF-Approved Extension

If additional time beyond the extension provided by the grantee is required and exceptional circumstances warrant, a formal request must be submitted to NSF. Two copies of the request, signed by the PI and the Authorized Organizational Representative, must be received by the cognizant NSF program office at least 45 days before the expiration date of the grant. The request must explain the need for the extension and include an estimate of the unobligated funds remaining and a plan for their use. As indicated above, that unobligated funds may remain at the expiration of the grant is not in itself sufficient justification for an extension. The plan must adhere to the previously approved objectives of the project.

Any NSF-approved no-cost extension will be issued by an NSF Grants Officer in the form of an amendment to the grant specifying a new expiration date. Grantees are cautioned not to make new commitments or incur new expenditures after the expiration date in anticipation of a no-cost extension. Grantees are **strongly encouraged** to use FastLane to transmit their no-cost extension requests to NSF. Please note that some NSF Directorates **require** electronic submission of requests for NSF-approved no-cost extensions via FastLane. Please check the cognizant Directorate or FastLane Web site to see if submission via FastLane is required.

CHAPTER VII

GRANT ADMINISTRATION HIGHLIGHTS

The administration of grants is governed by the actual conditions of the grant. (See Section VI.A. for additional information regarding the contents of an NSF grant.) The following information highlights frequently asked grant administration questions.

For additional information about the award and administration of NSF grants, proposers and grantees may refer to the *NSF Grant Policy Manual* (NSF 95-26). Frequently Asked Questions (FAQs) regarding grant administration are available on the Division of Grants & Agreements Web site at: "<http://www.nsf.gov/bfa/dga>".

The grantee organization has primary responsibility for general supervision of all grant activities and for notifying NSF of significant problems relating to misconduct in science and engineering or administrative matters. The PI is responsible for the conduct of the research or educational work, the publication of results, and is expected to provide technical leadership to the project whether or not any salary is provided from grant funds.

NSF encourages PIs to communicate the progress of projects supported by NSF to program officers.

A. GENERAL REQUIREMENTS

Grants for financial assistance are subject to certain statutory and other general requirements, such as compliance with the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and other laws and regulations prohibiting discrimination; prohibition of misconduct in science and engineering; Drug-Free Workplace requirements; restrictions on lobbying; patent and copyright requirements; cost sharing; and the use of US-flag carriers for international travel. These are identified in the GPM and are summarized in NSF Grant Conditions.

B. PRIOR APPROVAL REQUIREMENTS

Prior written authorization from NSF is required for the following: (1) transfer of the project effort; (2) change in objectives or scope; (3) change in PI; (4) a substantial change in PI effort; (5) reallocation of funds budgeted for participant support; or (6) construction activities costing \$10,000 or more. Changes in participant support costs require Program Officer approval; all the other changes listed above require Grants Officer approval. (See also GPM Exhibit III-1, which highlights grantee notifications to and requests for approval from NSF.) Many of the requests for prior approval identified above can be submitted electronically to NSF through use of the FastLane system. Grantees are strongly encouraged to use FastLane to process these types of transactions.

C. TRANSFER OF PI

If a PI plans to leave an organization during the course of a grant, the organization has the prerogative to nominate a replacement PI or request that the grant be terminated. Replacement PIs are subject to NSF approval. In those cases where a particular PI's participation is integral to a given project and the PI's original and new organizations agree, NSF will arrange a transfer of the grant and the assignment of remaining unobligated funds to the PI's new organization. (See GPM Section 312 and GPM Exhibit III-2 for NSF Form 1263, *NSF Grant Transfer Request*, or on the NSF Web site at: "<http://www.nsf.gov/bfa/cpo/forms/start.htm>".) Upon transfer of the grant to the new organization, any monetary discrepancies must be resolved between the original and the new grantee. In circumstances where NSF's interests are adversely affected by such discrepancies, it reserves the right to resolve the situation. The NSF FastLane system is not yet available for NSF Grant Transfer Requests.

D. EQUIPMENT

Title to equipment purchased or fabricated by an academic institution or other non-profit organization with NSF grant funds normally vests in the grantee organization. Title to equipment acquired through an NSF grant by a small business or other commercial organization will normally vest in the Government. When title to specialized equipment purchased with grant funds vests in the grantee organization and the PI moves to another non-profit organization, NSF encourages transfer of the equipment to the new organization provided it is not required at the organization holding title, the cost of the transfer (shipping charges, freight, etc.) is not excessive, and the PI continues the project at the new location.

E. EXCESS GOVERNMENT PROPERTY

As a means of providing additional support and conserving supply and equipment funds, NSF may sponsor the transfer of a limited quantity of excess Government-owned scientific equipment to an NSF grantee. To learn more about the NSF Grantee Excess Property Program, grantees should refer to GPM Section 546 or write to:

National Science Foundation
Mission Support Section, DAS, Room 295
4201 Wilson Boulevard
Arlington, VA 22230

Before transfer of excess Government equipment can be authorized, justification must be provided to NSF by the grantee that the equipment will further the objectives of an active NSF grant. The NSF grant numbers should be cited.

F. SUSPENSION OR TERMINATION OF GRANTS

NSF grants may be suspended or terminated in accordance with the procedures contained in the Grant Conditions. Grants may also be terminated by mutual agreement. Termination by mutual agreement shall not affect any commitment of grant funds that, in the judgment of NSF and the grantee, had become firm before the effective date of the termination. (See GPM Section 910.)

G. GRANT REPORTS

1. Annual and Final Project Reports

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period. (Some programs or awards require more frequent project reports.)

Within 90 days after expiration of a grant, the PI also is required to submit a final project report. Approximately 30 days before expiration, NSF will send a notice to remind the PI of the requirement to file the final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

NSF has implemented a new electronic project reporting system, available through FastLane, which permits electronic submission and updating of project reports, including information on: project participants (individual and organizational); activities and findings; publications; and, other specific products and contributions. Reports will continue to be required annually and after the expiration of the grant, but PIs will not need to re-enter information previously provided, either with the proposal or in earlier updates using the electronic system.

Effective October 1, 1998, PIs are required to use the new reporting format for annual and final project reports. The NSF Form 1328, *Annual NSF Grant Progress Report*, and NSF Form 98A, *Final Project Report*, therefore, have been eliminated. PIs are strongly encouraged to submit reports electronically via the project reporting system in FastLane. For those PIs who cannot access FastLane, paper copies of the new report formats may be obtained from the NSF Clearinghouse (see page i for address information). NSF expects to require electronic submission of all annual and final project reports via FastLane beginning in October, 1999.

2. Quarterly and Final Expenditure Reports

Quarterly and final expenditure information is provided by most grantees through the *Federal Cash Transactions Report*, SF 272, normally submitted (including a signed certification) by the grantee's financial officer. Awardees are strongly encouraged to electronically submit this information via the Business Office functions in FastLane. Contact the Division of Financial Management for additional information at (703) 306-1283.

H. SHARING OF FINDINGS, DATA AND OTHER RESEARCH PRODUCTS

NSF advocates and encourages open scientific communication. NSF expects significant findings from supported research and educational activities to be promptly submitted for publication with authorship that accurately reflects the contributions of those involved. It expects PIs to share with other researchers, at no more than incremental cost and within a reasonable time, the data, samples, physical collections and other supporting materials created or gathered in the course of the work. It also encourages grantees to share software and inventions, once appropriate protection for them has been secured, and otherwise act to make the innovations they embody widely useful and usable.

NSF program management will implement these policies, in ways appropriate to field and circumstances, through the proposal review process; through award negotiations and conditions; and through appropriate support and incentives for data cleanup, documentation, dissemination, storage and the like. Adjustments and, where essential, exceptions may be allowed to safeguard the rights of individuals and subjects, the validity of results and the integrity of collections, or to accommodate legitimate interests of investigators.

I. ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER

An acknowledgment of NSF support and a disclaimer must appear in publications (including Web pages) of any material, whether copyrighted or not, based on or developed under NSF-supported projects:

This material is based upon work supported by the National Science Foundation under Grant No. (grantee should enter NSF grant number).

NSF support must also be acknowledged during all news media interviews, including popular media such as radio, television and news magazines.

Except for articles or papers published in scientific, technical or professional journals, the following disclaimer should be included:

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

J. RELEASE OF GRANTEE PROPOSAL INFORMATION

A proposal that results in an NSF award will be available to the public on request, except for privileged information or material that is personal, proprietary or otherwise exempt from disclosure under law. Appropriate labeling in the proposal aids identification of what may be specifically exempt. (See Section I.B.) Such information will be withheld from public disclosure to the extent permitted by law, including the Freedom of Information Act. Without assuming any liability for inadvertent disclosure, NSF will seek to limit disclosure of

such information to its employees and to outside reviewers when necessary for merit review of the proposal, or as otherwise authorized by law.

Portions of proposals resulting in grants that contain descriptions of inventions in which either the Government or the grantee owns a right, title, or interest (including a non-exclusive license) will not normally be made available to the public until a reasonable time has been allowed for filing patent applications. NSF will notify the grantee of receipt of requests for copies of funded proposals so the grantee may advise NSF of such inventions described, or other confidential, commercial or proprietary information contained in the proposal.

A proposal that does not result in an NSF grant will be retained by NSF for a prescribed time (currently five years), but will be released to the public only with the consent of the proposer or to the extent required by law.

K. LEGAL RIGHTS TO INTELLECTUAL PROPERTY

NSF normally allows grantees to retain principal legal rights to intellectual property developed under its grants. This policy

provides incentive for development and dissemination of inventions, software and publications that can enhance their usefulness, accessibility and upkeep. It does not, however, reduce the responsibility of researchers and organizations to make results, data and collections available to the research community.

L. YEAR 2000 COMPUTER PROBLEM

In accordance with Important Notice No. 120 dated June 27, 1997, Subject: *Year 2000 Computer Problem*, NSF awardees are reminded of their responsibility to take appropriate actions to ensure that the NSF activity being supported is not adversely affected by the Year 2000 problem. Potentially affected items include computer systems, databases, and equipment. The National Science Foundation should be notified if an awardee concludes that the Year 2000 will have a significant impact on its ability to carry out an NSF funded activity. Information concerning Year 2000 activities can be found on the NSF Web site at: "<http://www.nsf.gov/oirm/y2k/start.htm>".

APPENDIX A

PROGRAMS PROVIDING SUPPORT FOR SCIENTIFIC AND ENGINEERING RESEARCH AND EDUCATION

For paper submissions, the required number of copies of proposals to be provided, including the original, is specified in parentheses.²¹

	Tel. No.
	Area Code (703)
OPP Office of Polar Programs	306-1030
<i>Arctic Sciences Section (15)</i>	306-1029
Arctic Natural Sciences Program	306-1029
Arctic Social Sciences Program	306-1029
Arctic System Science Program	306-1029
Arctic Research and Policy	306-1029
<i>Polar Research Support Section</i>	306-1032
<i>Antarctic Sciences Section (20)</i>	306-1033
Antarctic Information Program	306-1031
Aeronomy and Astrophysics Program	306-1033
Biology and Medicine Program	306-1033
Geology and Geophysics Program	306-1033
Glaciology Program	306-1033
Ocean and Climate Sciences Program	306-1033
OIA Office of Integrative Activities	306-1040
Major Research Instrumentation Program (10)	306-1040
Science and Technology Centers	306-1040
BIO Directorate for Biological Sciences	306-1400
DBI <i>Division of Biological Infrastructure (15)</i>	306-1470
Instrument Related Activities	306-1469
Research Resources	306-1469
Training	306-1469
DEB <i>Division of Environmental Biology (15)</i>	306-1480
Ecological Studies	306-1479
Systematic and Population Biology	306-1481
IBN <i>Division of Integrative Biology & Neuroscience (15)</i>	306-1420
Developmental Mechanisms	306-1417
Neuroscience	306-1424
Physiology & Ethology	306-1421
MCB <i>Division of Molecular & Cellular Biosciences (15)</i>	306-1440
Biomolecular Structure and Function	306-1443
Biomolecular Processes	306-1441
Cell Biology	306-1442
Genetics	306-1439
CISE Directorate for Computer & Information Science & Engineering	306-1900
CCR <i>Division of Computer-Communications Research (10)</i>	306-1910
Theory of Computing	306-1914
Numeric, Symbolic and Geometric Computation	306-1912
Computer Systems Architecture	306-1936
Software Engineering and Languages	306-1911
Operating Systems and Compilers	306-1918

*These programs may require additional information on the proposal cover sheet and may require additional documentation regarding eligibility or other special conditions. Program Announcements are available from the NSF Clearinghouse or the offices listed.

²¹ Detailed instructions for electronic proposal submission via FastLane are available at: "<https://www.fastlane.nsf.gov/a1/newstan.htm>".

	Design Automation	306-1936
	Communications	306-1912
	Signal Processing Systems	306-1921
IIS	<i>Division of Information and Intelligent Systems (10)</i>	306-1930
	Special Projects	306-1930
	Computation and Social Systems	306-1927
	Information and Data Management	306-1926
	Robotics and Human Augmentation	306-1928
	Human Computer Interaction	306-1928
	Knowledge and Cognitive Systems	306-1926
EIA	<i>Division of Experimental and Integrative Activities (15)</i>	306-1980
	CISE Research Infrastructure/CRLT	306-1981
	CISE Instrumentation/Minority Infrastructure/Postdoctoral Associateships/Special Projects	306-1981
	Digital Government	306-1980
	Science and Technologies Centers/POWRE	306-1980
	CISE Educational Innovation/REU/Special Projects	306-1981
	Experimental Software Systems	306-1981
	Experimental Systems/CARE	306-1981
	Challenges in CISE	306-1981
ACIR	<i>Division of Advanced Computational Infrastructure & Research (15)</i>	306-1970
	Partnerships for Advanced Computational Infrastructure	306-1963
	Advanced Computational Research	306-1962
ANIR	<i>Division of Advanced Networking Infrastructure & Research (10)</i>	306-1950
	Advanced Networking Infrastructure	306-1949
	Special Projects in Networking	306-1949
	Networking Research	306-1949
EHR	Directorate for Education & Human Resources	306-1600
ESR	<i>Division of Educational Systemic Reform (15)</i>	306-1690
	Statewide Systemic Initiatives Program (SSI)	306-1682
	Urban Systemic Initiatives Program (USI)	306-1684
	Rural Systemic Initiatives Program (RSI)	306-1684
EPS	<i>Experimental Program to Stimulate Competitive Research (EPSCoR) (15)</i>	306-1683
ESIE	<i>Division of Elementary, Secondary & Informal Education (14)</i>	306-1620
	Teacher Enhancement Program (TE)	306-1613
	Presidential Awards for Excellence in Mathematics & Science Teaching (PAEMST)	306-1613
	Instructional Materials Development Program (IMD)	306-1614
	Advanced Technological Education Program (ATE)	306-1614
	Informal Science Education Program (ISE)	306-1616
DUE	<i>Division of Undergraduate Education (10)</i>	306-1670
	General Information	306-1666
	Course, Curriculum & Laboratory Improvement Program (CCLI)	306-1667
	Advanced Technological Education Program (ATE)	306-1668
	Collaboratives for Excellence in Teacher Preparation Program (CETP) (20)	306-1669
DGE	<i>Division of Graduate Education (15)</i>	306-1630
	Graduate Research Fellowships Program (GRF) (1)	306-1694
	Integrative Graduate Education Research and Training Program (IGRET) (1)	306-1696
	Postdoctoral Fellowships in Science, Mathematics, Engineering and Technology Education Program (PFSMETE) (6)	306-1697
	NATO Postdoctoral Fellowship Program (5)	306-1697
HRD	<i>Division of Human Resource Development* (15)</i>	306-1640
	Comprehensive Partnerships for Mathematics and Science Achievement Program (CPMSA)	306-1633
	Centers of Research Excellence in Science & Technology Program (CREST)	306-1634
	Alliances for Minority Participation Program (AMP)	306-1632
	Program for Persons with Disabilities (PPD)	306-1636
	Program for Women and Girls (PWG)	306-1637
	Professional Opportunities for Women in Research and Education Program (POWRE)	306-1649

	Presidential Awards for Excellence in Science, Mathematics and Engineering Mentoring Program (PAESMEM)	306-1640
	Minority Graduate Education (MGE)	306-1640
	Initiative for Historically Black Colleges & Universities (HBCU)	306-1640
REC	<i>Division of Research, Evaluation & Communication (15)</i>	306-1650
	Learning and Intelligent Systems Program (LIS)/Technology	306-1651
	Research on Education, Policy and Practice Program (REPP)	306-1652
	Program Evaluation	306-1653
ENG	Directorate for Engineering	306-1300
BES	<i>Division of Bioengineering & Environmental Systems (10)</i>	306-1318
	Environmental Systems Section	306-1319
	Bioengineering & Research to Aid Persons with Disabilities	306-1318
	Environmental & Ocean Systems	306-1619
	Environmental Remediation	306-1318
CTS	<i>Division of Chemical & Transport Systems (10)</i>	306-1370
	Chemical Reaction Processes Program	306-1371
	Interfacial, Transport & Separation Process Program	306-1371
	Fluid, Particulate & Hydraulic Systems Program	306-1371
	Thermal Systems Program	306-1371
DMII	<i>Division of Design, Manufacture & Industrial Innovation (10)</i>	306-1328
	Design & Integration Engineering Program	306-1328
	Manufacturing Processes & Equipment Program	306-1328
	Operations Research & Production Systems	306-1328
	Small Business Technology Transfer Program	306-1391
	Small Business Innovation Research Program	306-1391
	Office of Small Business Research Development	306-1330
	Office of Small & Disadvantaged Business Utilization	306-1330
ECS	<i>Division of Electrical & Communications Systems (10)</i>	306-1339
	Engineering Systems Program	306-1339
	Quantum Electronics, Waves & Beams Program	306-1339
	Solid-State & Microstructures Program	306-1339
	Communications & Computational Systems Program	306-1339
EEC	<i>Division of Engineering Education and Centers (15)</i>	306-1380
	Engineering Research Centers Program	306-1381
	Industry/University Cooperative Research Centers Program	306-1383
	Human Resources Program	306-1384
	Engineering Education Program	306-1382
CMS	<i>Division of Civil & Mechanical Systems (10)</i>	306-1360
	Mechanics & Materials Program	306-1361
	Structures, Geomechanics & Building Systems Program	306-1361
	Dynamic Systems & Control Program	306-1361
	Surface Engineering & Tribology Program	306-1361
	Structural Systems & Construction Processes	306-1361
	Large Structural & Building Systems	306-1361
	Geomechanical/Geotechnology and Geoenvironmental Systems	306-1361
	Hazard Mitigation Section	306-1362
	Earthquake Hazard Mitigation Program	306-1362
	Natural & Technological Hazard Mitigation Program	306-1362
GEO	Directorate for Geosciences	306-1500
ATM	<i>Division of Atmospheric Sciences (10)</i>	306-1520
	UCAR & Lower Atmospheric Facilities Oversight Section	306-1521
	Lower Atmosphere Research Section	306-1523
	Physical Meteorology Program	306-1524
	Atmospheric Chemistry Program	306-1522
	Mesoscale Dynamic Meteorology Program	306-1526
	Climate Dynamics Program	306-1527
	Paleoclimate Program	306-1527
	Large Scale Dynamic Meteorology Program	306-1528
	Upper Atmosphere Research Section	306-1518
	Aeronomy Program	306-1529

		Tel. No.
		Area Code (703)
	Magnetospheric Physics Program	306-1519
	Solar Terrestrial Research Program	306-1530
	Upper Atmospheric Facilities	306-1531
EAR	<i>Division of Earth Sciences (20)</i>	306-1550
	Research Projects Section	306-1553
	Geology & Paleontology Program	306-1551
	Tectonics Program	306-1552
	Petrology & Geochemistry Program	306-1554
	Hydrologic Sciences Program	306-1549
	Special Projects Section	306-1553
	Geophysics Program	306-1556
	Education & Human Resources Program	306-1557
	Continental Dynamics Program	306-1559
	Instrumentation & Facilities Program	306-1558
OCE	<i>Division of Ocean Sciences (15)</i>	306-1580
	Oceanographic Centers & Facilities Section	306-1576
	Instrumentation & Technical Services Program	306-1578
	Ship Operations Program	306-1577
	Ocean Drilling Program	306-1581
	Ocean Sciences Research Section	306-1582
	Biological Oceanography Program	306-1587
	Chemical Oceanography Program	306-1589
	Physical Oceanography Program	306-1583
	Marine Geology & Geophysics Program	306-1586
	Oceanographic Technology and Interdisciplinary Coordination Program	306-1584
MPS	Directorate for Mathematical & Physical Sciences	306-1800
AST	<i>Division of Astronomical Sciences (12)</i>	306-1820
	Education and Human Resources & Special Programs	306-1819
	Electromagnetic Spectrum Management Unit	306-1823
	National Optical Astronomy Observatories	306-1828
	National Astronomy & Ionosphere Center	306-1822
	National Radio Astronomy Observatory	306-1829
	Extragalactic Astronomy & Cosmology Program	306-1827
	Science & Technology Center	306-1821
	Planetary Astronomy Program	306-1826
	Stellar Astronomy & Astrophysics Program	306-1825
	Galactic Astronomy Program	306-1826
	Advanced Technologies & Instrumentation Program	306-1828
CHE	<i>Division of Chemistry (12)</i>	306-1840
	Chemical Instrumentation	306-1849
	Organic Dynamics	306-1857
	Organic Synthesis	306-1851
	Theoretical & Computational Chemistry Program	306-1844
	Experimental Physical Chemistry Program	306-1856
	Inorganic, Bioinorganic & Organometallic Program	306-1842
	Analytical & Surface Chemistry Program	306-1852
	Special Projects Office	306-1850
DMR	<i>Division of Materials Research (10)</i>	306-1810
	Materials Research Science & Engineering Centers	306-1815
	National Facilities & Instrumentation	306-1817
	Condensed Matter Physics	306-1818
	Materials Theory	306-1834
	Metals, Ceramics & Electronic Materials	306-1835
	Solid-State Chemistry & Polymers	306-1839
DMS	<i>Division of Mathematical Sciences (10)</i>	306-1870
	Applied Mathematics	306-1877
	Classical Analysis	306-1879
	Modern Analysis	306-1887
	Algebra & Number Theory	306-1875
	Topology & Foundations	306-1886
	Infrastructure	306-1874

		Tel. No.
		Area Code (703)
	Statistics & Probability	306-1885
	Geometric Analysis Program	306-1881
	Computational Mathematics Program	306-1878
PHY	<i>Division of Physics (10)</i>	306-1890
	Special Programs	306-1809
	Atomic, Molecular & Optical Physics	306-1807
	Elementary Particle Physics	306-1894
	Theoretical Physics	306-1889
	Nuclear Physics	306-1806
	Gravitational Physics	306-1899
SBE	Directorate for Social, Behavioral & Economic Sciences	306-1700
INT	<i>Division of International Programs (10)</i>	306-1710
	Africa, Near East and South Asia Program	306-1707
	East Asia and Pacific Program	306-1704
	Americas Program	306-1706
	Eastern Europe Program	306-1703
	Western Europe Program	306-1702
	Japan and Korea Program	306-1701
	International Science and Engineering Issues Office	306-1711
	NSF Tokyo Office	(81-33) 224-5505
	NSF Europe Office	(33-14) 312-2108
SBR	<i>Division of Social, Behavioral and Economic Research (18)</i>	306-1760
	Geography and Regional Sciences	306-1754
	Archaeology, Archaeometry & Systematic Collections	306-1759
	Cultural Anthropology	306-1758
	Physical Anthropology	306-1758
	Linguistics	306-1731
	Human Cognition and Perception	306-1732
	Social Psychology	306-1728
	Economics	306-1753
	Decision, Risk & Management Science	306-1757
	Transformations to Quality Organizations (TQO)	306-1757
	Political Science	306-1761
	Law and Social Science	306-1762
	Sociology	306-1756
	Methodology, Measurement, and Statistics	306-1729
	Science and Technology Studies	306-1743
	Societal Dimensions of Engineering, Science & Technology	306-1742
	Cross-Disciplinary Activities	306-1733
SRS	<i>Division of Science Resources Studies (10)</i>	306-1780
	Research & Development Statistics Program	306-1772
	Human Resources Statistics Program	306-1774
	Science & Engineering Indicators Program	306-1777
	Integrated Studies Program	306-1776
	Information Services Group	306-1773

APPENDIX B

CHECKLIST FOR PROPOSAL PREPARATION

Codes:

¹ = Use of format required*

² = Use of format optional

³ = Use instructions provided in *Grant Proposal Guide* for completion of this section of the proposal

Complete proposals help expedite review and processing. To assure that research and other proposals submitted to the Foundation are complete, an administrative check should be made before mailing.

- Is all or part of the proposal required to be submitted via FastLane?***
- Information About Principal Investigators/Project Directors, NSF Form 1225 (one copy only) ¹
- List of suggested reviewers, or reviewers not to include (one copy only) (optional)
- Cover Sheet for Proposal to the National Science Foundation, Certification Page, NSF Form 1207 (one copy only),¹ Page 2
 - All required signatures (Principal Investigator, co-Principal Investigator(s), and Authorized Organizational Representative)
- Deviation Authorization (one copy only, if applicable)
- SF LLL, Disclosure of Lobbying Activities (one copy only, if applicable)
- Cover Sheet for Proposal to the National Science Foundation, Page 1, NSF Form 1207¹
- Program Announcement/Solicitation No./Closing Date. If the proposal is not submitted in response to a specific program announcement, proposers must enter "NSF 99-2"
 - Specific NSF program(s) identified
 - For renewal proposal, previous award number entered
 - Related preproposal number entered, if applicable
 - Organization's DUNS number included
 - Appropriate boxes on Cover Sheet checked
- Project Summary³
- Table of Contents, NSF Form 1359¹
- Project Description, including Results from Prior NSF Support³
 - Human-resource information (required for renewal proposals from academic institutions only)
- References Cited³
- Biographical Sketches³
- Summary Proposal Budget, cumulative and annual, NSF Form 1030¹
 - Budget Justification (not to exceed three pages)
 - Cost sharing amount, if applicable
- Current and Pending Support, NSF Form 1239²
- Facilities, Equipment and Other Resources, NSF Form 1363²
- Special Information and Supplementary Documentation (letters of commitment, eligibility statements, etc.) as required
 - Animal Care and Use Statement, if available at the time of proposal submission***
 - Human Subjects Certification, if available at the time of proposal submission****
 - Special provisions for research in Greenland or Antarctica
- Required number of copies of the proposal, including the original signed copy (See Appendix A.)
- Proposal packages addressed exactly as shown on page 4

*See *Proposal Forms Kit*, for NSF's Forms Acceptance Policy.

Some NSF programs may **require electronic submission of all or part of a proposal, including unsolicited proposals. Please check the FastLane Web site <https://www.fastlane.nsf.gov/a0/fldeadli.htm> prior to proposal submission for a listing of programs and program announcements that require submission via FastLane.

***Statement that indicates that the proposal has been reviewed and approved by the Institutional Animal Care and Use Committee and that assures the grantee will comply with the Public Health Service Policy on Humane Care and Use of Laboratory Animals by Awardee Institutions. If statement is submitted with the proposal, include in Section I. After proposal submission, send to cognizant program office.

****Statement that indicates that the proposal has been approved and will be subject to continuing review by the Institutional Review Board and that an approved assurance for the institution in conformance with the Common Rule (*Federal Policy for the Protection of Human Subjects*, 45 CFR §690) is appropriately filed with a Federal agency. If statement is submitted with the proposal, include in Section I. After proposal submission, send to cognizant program office.

APPENDIX C

DEFINITIONS OF CATEGORIES OF PERSONNEL

The personnel categories listed on parts A and B of the proposal budget (NSF Form 1030) are defined as follows:

A. Senior Personnel

(1-5) *(co) Principal Investigator(s)* — the individual(s) designated by the grantee and approved by NSF who will be responsible for the scientific or technical direction of the project. If more than one, the first one listed will have primary responsibility for the project and the submission and signing of reports.

Faculty Associate (faculty member) — an individual other than the Principal Investigator(s) considered by the performing institution to be a member of its faculty or who holds an appointment as a faculty member at another institution, and who will participate in the project being supported.

B. Other Personnel

1. *Postdoctoral Associate* — an individual who received a Ph.D., M.D., D.Sc. or equivalent degree less than five years ago, who is not a member of the faculty at the performing institution, and who is not reported under Senior Personnel above.

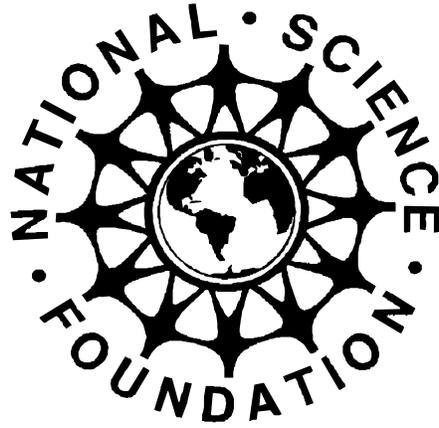
2. *Other Professional* — a person who may or may not hold a doctoral degree or its equivalent, who is considered a professional and is not reported as a Principal Investigator, faculty associate, postdoctoral associate or student. Examples of persons included in this category are doctoral associates not reported under B1, professional technicians, physicians, veterinarians, system experts, computer programmers and design engineers.

3. *Graduate Student* (research assistant) — a part-time or full-time student working on the project in a research capacity who holds at least a bachelor's degree and is enrolled in a degree program leading to an advanced degree.

4. *Undergraduate Student* — a student who is enrolled in a degree program (part-time or full-time) leading to a bachelor's or associate's degree.

5.&6. These categories include persons working on the project in a non-research capacity, such as secretaries, clerk-typists, draftsmen, animal caretakers, electricians and custodial personnel regardless of whether they hold a degree or are involved in degree work.

Any personnel category for which NSF funds are requested should indicate, in the parentheses provided on the NSF Form 1030, the number of persons expected to receive some support from those funds and, where called for in the budget format, person-months to the nearest tenth.



***Proposal
Forms
Kit***

***NSF 99-3
October 1998
(Replaces NSF 98-3)***

PROPOSAL FORMS KIT

A. INTRODUCTION

This *Proposal Forms Kit* supplements the *Grant Proposal Guide* (GPG), the NSF Guide that provides guidance for the preparation of unsolicited proposals to NSF. An unsolicited proposal is prepared by a Principal Investigator and submitted by an organization on its own initiative and not in response to a formal written solicitation from NSF. Contact with appropriate NSF program personnel is encouraged to help determine if preparation of a formal proposal is appropriate.

The Kit contains the forms necessary for preparation of unsolicited proposals. While these forms are generally applicable, some NSF programs use specific program announcements which may require additional forms for submission of proposals to NSF or which may modify the general guidance in the GPG.

Please give careful attention to the requirements established in the GPG and the instructions provided on each form. Proposals that do not meet such requirements may be returned without further consideration by NSF. Of particular importance are the page limitations, format and content requirements that are identified on the forms and/or established throughout the GPG. Proposers should ensure that, where required, the submitted documents are signed and dated. A properly prepared proposal will facilitate the administrative processing and merit review that must occur before an award can be made.

B. FORMS PROVIDED

Codes: ^A=Use of format required
 ^B=Use of format optional

The NSF *Proposal Forms Kit* includes one copy of each of the following forms:

- ❖ NSF Form 1207, Cover Sheet for Proposal to the National Science Foundation^A
- ❖ NSF Form 1359, Table of Contents^A
- ❖ NSF Form 1030, Summary Proposal Budget^A
- ❖ NSF Form 1239, Current and Pending Support^B
- ❖ NSF Form 1363, Facilities, Equipment and Other Resources^B

C. FORM PREPARATION INSTRUCTIONS

Each form is self-explanatory or provides specific completion instructions; additional information is located in the GPG as follows:

- ❖ NSF Form 1207, Cover Sheet for Proposal to the National Science Foundation, Page 6
- ❖ NSF Form 1359, Table of Contents, Page 7
- ❖ NSF Form 1030, Summary Proposal Budget, Page 9
- ❖ NSF Form 1239, Current and Pending Support, Page 12
- ❖ NSF Form 1363, Facilities, Equipment and Other Resources, Page 13

Follow the instructions in the GPG regarding completion of the following sections of the proposal:

- ❖ Project Summary, Page 7
- ❖ Project Description, Page 7
- ❖ References Cited, Page 8
- ❖ Biographical Sketches, Page 8

D. FORMS ACCEPTANCE POLICY

NSF Proposal Forms Kit ¾ Paper copy forms provided in the *Proposal Forms Kit* may be used. Additional copies of this Kit, in paper and electronic medium, are available as indicated in Section G below.

Computer-generated facsimiles ¾ Computer-generated facsimiles may be substituted for any of the forms contained in the Kit. The categories or information requested, however, should not be rearranged or altered.

Photocopies ¾ Forms may be reproduced but must be clear and readable. NSF two-sided forms may be copied and submitted either on one two-sided sheet of paper or on single separate sheets of paper.

FastLane ¾ The NSF FastLane system uses Internet/Web technology to facilitate the way NSF does business with the research, education, and related communities. The NSF FastLane system is available for proposal preparation, submission, status check, project reporting and post-award administrative activities. Its functions may be accessed by using Web browsers that support file upload and forms capabilities (e.g., Netscape Navigator 3.0+ or Microsoft Internet Explorer 4.01+.)

Access to proposal and post-award functions is limited to staff from FastLane registered organizations and is secured through the use of Personal Identification Numbers (PINs). To register an organization, authorized organizational representatives must complete the registration form that can be accessed through the Registration Information hyperlink on the FastLane Web site.¹ Once an organization is registered, PINs for individual staff are available from the organization's sponsored projects office.

E. WHEN TO SUBMIT PROPOSALS

Many NSF programs accept proposals any time. Other programs, however, establish target dates or deadlines for submission of proposals to allow time for their consideration by review panels which meet periodically. These target dates and deadlines are published in specific program announcements, which can be obtained from the NSF Clearinghouse at: pubs@nsf.gov or electronically through the NSF Web site at: "<http://www.nsf.gov>". Lists of deadlines and target dates also are available electronically on the NSF Web site.

¹ Detailed information about the FastLane system is available from the FastLane Web site at: "<http://www.fastlane.nsf.gov>".

Unless otherwise specified in a program announcement, proposals must be received by the specified date. A proposal received after a deadline, however, may be acceptable if it carries a legible proof-of-mailing date assigned by the carrier and the proof-of-mailing date is not later than one week prior to the deadline date. If the deadline date falls on a weekend, it will be extended to the following Monday; if the date falls on a holiday, it will be extended to the following work day. The deadline date will be waived only in extenuating circumstances. Inquiry about submission may also be made to the appropriate program. For information about receipt of proposals submitted electronically, see Section F.

F. HOW TO SUBMIT PROPOSALS

For standard unsolicited proposals, electronic proposal submission via the NSF FastLane system is the preferred method and is strongly encouraged.² Some NSF programs may **require** electronic submission of all or part of a proposal, including unsolicited proposals. Please check the FastLane Web site prior to proposal submission for a listing of programs and program announcements that require submission via FastLane. Unless otherwise specified by a program or in a program announcement, proposals may continue to be submitted in paper form.

A proposal needs to be submitted only once to NSF, even if review by multiple programs is envisioned by the proposer. The submission of duplicate or substantially similar proposals concurrently for review by more than one program without prior NSF approval may result in the return of the redundant proposals. (See Section GPG IV.B. for further information on proposal return.)

The following are specific instructions regarding the submission and receipt of electronic and paper proposals to NSF:

1. Electronic submission. A proposal is considered complete when the proposal, including the Project Description, has been submitted to NSF. If the Project Description is included in the electronic submission, unless otherwise specified in a program announcement, the receipt date will be the date the sponsored projects office transmits the proposal to NSF. The signed proposal Cover Sheet (NSF Form 1207) must be forwarded to the following address and received by NSF within five working days following proposal submission.³

National Science Foundation
DIS-FastLane Cover Sheet
4201 Wilson Blvd.
Arlington, VA 22230

A proposal may not be processed until the complete proposal (including signed Cover Sheet) has been received by NSF.

2. Paper submission. The delivery address **must clearly identify the NSF Announcement Number** under which the proposal is being submitted, if applicable. If the proposal is not submitted in response to a specific announcement, proposers should enter the NSF Program(s), using Appendix A of this document as a guide, to which the proposal should be directed. NSF will determine which program(s) will evaluate each proposal.

Unless stated otherwise in a program announcement, proposals should not be addressed or sent directly to the cognizant Program Officer. If copies of the proposal are mailed or delivered in more than one package, the number of packages and the NSF Announcement number, if applicable, should be marked on the outside of each package. Proposals must be sent prepaid, not collect. Proposals sent by special messenger or courier should be delivered to the below address, weekdays, except Federal holidays, between the hours of 8:30 a.m. and 5:00 p.m. ET. Please contact the NSF Mail Room, (703) 306-0657, with any questions regarding the mailing or delivery of proposals.

Proposals must be addressed **exactly** as follows:

ANNOUNCEMENT/SOLICITATION NO _____
NATIONAL SCIENCE FOUNDATION PPU
NSF PROGRAM _____
4201 WILSON BLVD. ROOM P60
ARLINGTON VA 22230

3. Acknowledgment of proposal receipt. The acknowledgment of the receipt of the proposal will reference both the NSF proposal number and the cognizant NSF program to which the proposal has been assigned. Communications about the proposal should be addressed to the cognizant Program Officer with reference to the proposal number. Proposers are encouraged to use the NSF FastLane system described in GPG Section I.C. to verify the status of their submission to NSF.

G. ADDITIONAL COPIES OF THIS PROPOSAL FORMS KIT

Additional copies of the *Proposal Forms Kit* (NSF 99-3) or the GPG (NSF 99-2), which contains the *Proposal Forms Kit*, may be ordered from:

NSF Clearinghouse
P.O. Box 218
Jessup, MD 20794-0218

Telephone: 301-947-2722
e-mail: pubs@nsf.gov

The GPG or the *Proposal Forms Kit* may be obtained by accessing documents NSF 99-2 or NSF 99-3 electronically on the NSF Web site at: "<http://www.nsf.gov>".

² Instructions for proposal preparation and submission via FastLane are available at: "<https://www.fastlane.nsf.gov/a1/newstan.htm>".

³ Program announcements and solicitations may provide different instructions for submission of the signed Cover Sheet. In these cases, the guidance in the program announcement or solicitation should be followed.

**INFORMATION ABOUT PRINCIPAL INVESTIGATORS/PROJECT DIRECTORS (PI/PD) and
co-PRINCIPAL INVESTIGATORS/co-PROJECT DIRECTORS**

Submit ONE copy of this form for each PI/PD and co-PI/PD identified on the proposal. The form(s) should be attached to the original proposal as specified in GPG Section II.B. Submission of this information is voluntary and is not a precondition of award. The information will not be disclosed to external peer reviewers. **DO NOT INCLUDE THIS FORM WITH ANY OF THE OTHER COPIES OF YOUR PROPOSAL AS THIS MAY COMPROMISE THE CONFIDENTIALITY OF THE INFORMATION.**

PI/PD Name: _____

Gender: Male Female

Ethnicity: (Choose one response) Hispanic or Latino Not Hispanic or Latino

Race: (Select one or more)
 American Indian or Alaska Native
 Asian
 Black or African American
 Native Hawaiian or Other Pacific Islander
 White

Disability Status: (Select one or more)
 Hearing Impairment
 Visual Impairment
 Mobility/Orthopedic Impairment
 Other
 None

Citizenship: (Choose one) U.S. Citizen Permanent Resident Other non-U.S. Citizen

Check here if you do not wish to provide any or all of the above information (excluding PI/PD name):
REQUIRED: Check here if you are currently serving (or have previously served) as a PI, co-PI or PD on any federally funded project.

Ethnicity Definition:

Hispanic or Latino. A person of Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race.

Race Definitions:

American Indian or Alaska Native. A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.

Asian. A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

Black or African American. A person having origins in any of the black racial groups of Africa.

Native Hawaiian or Other Pacific Islander. A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

White. A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

WHY THIS INFORMATION IS BEING REQUESTED:

The Federal Government has a continuing commitment to monitor the operation of its review and award processes to identify and address any inequities based on gender, race, ethnicity, or disability of its proposed PIs/PDs. To gather information needed for this important tasks, the proposer should submit a single copy of this form for each identified PI/PD with each proposal. Submission of the requested information is voluntary and is not a precondition of award. However, information not submitted will seriously undermine the statistical validity, and therefore the usefulness, of information received from others. Any individual not wishing to submit some or all the information should check the box provided for this purpose. (The exceptions are the PI/PD name and the information about prior Federal support, the last question above.)

Collection of this information is authorized by the NSF Act of 1950, as amended, 42 U.S.C. 1861, et seq. Demographic data allows NSF to gauge whether our programs and other opportunities in science and technology are fairly reaching and benefiting everyone regardless of demographic category; to ensure that those in under-represented groups have the same knowledge of and access to programs and other research and educational opportunities; and to assess involvement of international investigators in work supported by NSF. The information may be disclosed to government contractors, experts, volunteers and researchers to complete assigned work; and to other government agencies in order to coordinate and assess programs. The information may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 63 Federal Register 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 Federal Register 268 (January 5, 1998).

COVER SHEET FOR PROPOSAL TO THE NATIONAL SCIENCE FOUNDATION

PROGRAM ANNOUNCEMENT/SOLICITATION NO./CLOSING DATE/If not in response to a program announcement/solicitation enter NSF 99-2					FOR NSF USE ONLY	
FOR CONSIDERATION BY NSF ORGANIZATIONAL UNIT(S) (Indicate the most specific unit known, i.e., program, division, etc.)					NSF PROPOSAL NUMBER	
DATE RECEIVED	NUMBER OF COPIES	DIVISION ASSIGNED	FUND CODE	DUNS # (Data Universal Numbering System)	FILE LOCATION	
EMPLOYER IDENTIFICATION NUMBER (EIN) OR TAXPAYER IDENTIFICATION NUMBER (TIN)		SHOW PREVIOUS AWARD NO. IF THIS IS <input type="checkbox"/> A RENEWAL <input type="checkbox"/> AN ACCOMPLISHMENT-BASED RENEWAL		IS THIS PROPOSAL BEING SUBMITTED TO ANOTHER FEDERAL AGENCY? YES <input type="checkbox"/> NO <input type="checkbox"/> IF YES, LIST ACRONYM(S)		
NAME OF ORGANIZATION TO WHICH AWARD SHOULD BE MADE			ADDRESS OF AWARDEE ORGANIZATION, INCLUDING 9 DIGIT ZIP CODE			
AWARDEE ORGANIZATION CODE (IF KNOWN)						
NAME OF PERFORMING ORGANIZATION, IF DIFFERENT FROM ABOVE			ADDRESS OF PERFORMING ORGANIZATION, IF DIFFERENT, INCLUDING 9 DIGIT ZIP CODE			
PERFORMING ORGANIZATION CODE (IF KNOWN)						
IS AWARDEE ORGANIZATION (Check All That Apply) (See GPG II.D.1 For Definitions) <input type="checkbox"/> FOR-PROFIT ORGANIZATION <input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> MINORITY BUSINESS <input type="checkbox"/> WOMAN-OWNED BUSINESS						
TITLE OF PROPOSED PROJECT						
REQUESTED AMOUNT \$	PROPOSED DURATION (1-60 MONTHS) months	REQUESTED STARTING DATE	SHOW RELATED PREPROPOSAL NO., IF APPLICABLE			
CHECK APPROPRIATE BOX(ES) IF THIS PROPOSAL INCLUDES ANY OF THE ITEMS LISTED BELOW						
<input type="checkbox"/> BEGINNING INVESTIGATOR (GPG I.A.3)			<input type="checkbox"/> VERTEBRATE ANIMALS (GPG II.D.12) IACUC App. Date _____			
<input type="checkbox"/> DISCLOSURE OF LOBBYING ACTIVITIES (GPG II.D.1)			<input type="checkbox"/> HUMAN SUBJECTS (GPG II.D.12) Exemption Subsection____or IRB App. Date _____			
<input type="checkbox"/> PROPRIETARY & PRIVILEGED INFORMATION (GPG I.B, II.D.7)			<input type="checkbox"/> INTERNATIONAL COOPERATIVE ACTIVITIES: COUNTRY/COUNTRIES _____			
<input type="checkbox"/> NATIONAL ENVIRONMENTAL POLICY ACT (GPG II.D.10)			<input type="checkbox"/> FACILITATION FOR SCIENTISTS/ENGINEERS WITH DISABILITIES (GPG V.G.)			
<input type="checkbox"/> HISTORIC PLACES (GPG II.D.10)			<input type="checkbox"/> RESEARCH OPPORTUNITY AWARD (GPG V.H)			
<input type="checkbox"/> SMALL GRANT FOR EXPLOR. RESEARCH (SGER) (GPG II.D.12)						
<input type="checkbox"/> GROUP PROPOSAL (GPG II.D.12)						
PI/PD DEPARTMENT			PI/PD POSTAL ADDRESS			
PI/PD FAX NUMBER						
NAMES (TYPED)	High Degree	Yr of Degree	Telephone Number	Electronic Mail Address		
PI/PD NAME						
CO-PI/PD						
CO-PI/PD						
CO-PI/PD						
CO-PI/PD						

CERTIFICATION PAGE

Certification for Principal Investigators and Co-Principal Investigators

I certify to the best of my knowledge that:

- (1) the statements herein (excluding scientific hypotheses and scientific opinions) are true and complete, and
- (2) the text and graphics herein as well as any accompanying publications or other documents, unless otherwise indicated, are the original work of the signatories or individuals working under their supervision. I agree to accept responsibility for the scientific conduct of the project and to provide the required project reports if an award is made as a result of this proposal.

I understand that the willful provision of false information or concealing a material fact in this proposal or any other communication submitted to NSF is a criminal offense (U.S.Code, Title 18, Section 1001).

Name (Typed)	Signature	Social Security No.*	Date
PI/PD			
Co-PI/PD			

Certification for Authorized Organizational Representative or Individual Applicant

By signing and submitting this proposal, the individual applicant or the authorized official of the applicant institution is: (1) certifying that statements made herein are true and complete to the best of his/her knowledge; and (2) agreeing to accept the obligation to comply with NSF award terms and conditions if an award is made as a result of this application. Further, the applicant is hereby providing certifications regarding Federal debt status, debarment and suspension, drug-free workplace, and lobbying activities (see below), as set forth in the *Grant Proposal Guide (GPG)*, NSF 99-2. Willful provision of false information in this application and its supporting documents or in reports required under an ensuing award is a criminal offense (U.S. Code, Title 18, Section 1001).

In addition, if the applicant institution employs more than fifty persons, the authorized official of the applicant institution is certifying that the institution has implemented a written and enforced conflict of interest policy that is consistent with the provisions of *Grant Policy Manual* Section 510; that to the best of his/her knowledge, all financial disclosures required by that conflict of interest policy have been made; and that all identified conflicts of interest will have been satisfactorily managed, reduced or eliminated prior to the institution's expenditure of any funds under the award, in accordance with the institution's conflict of interest policy. Conflicts that cannot be satisfactorily managed, reduced or eliminated must be disclosed to NSF.

Debt and Debarment Certifications (If answer "yes" to either, please provide explanation.)

Is the organization delinquent on any Federal debt? Yes No

Is the organization or its principals presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal Department or agency? Yes No

Certification Regarding Lobbying

This certification is required for an award of a Federal contract, grant or cooperative agreement exceeding \$100,000 and for an award of a Federal loan or a commitment providing for the United States to insure or guarantee a loan exceeding \$150,000.

Certification for Contracts, Grants, Loans and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

AUTHORIZED ORGANIZATIONAL REPRESENTATIVE	SIGNATURE	DATE
NAME/TITLE (TYPED)		
TELEPHONE NUMBER	ELECTRONIC MAIL ADDRESS	FAX NUMBER

*SUBMISSION OF SOCIAL SECURITY NUMBERS IS VOLUNTARY AND WILL NOT AFFECT THE ORGANIZATION'S ELIGIBILITY FOR AN AWARD. HOWEVER, THEY ARE AN INTEGRAL PART OF THE NSF INFORMATION SYSTEM AND ASSIST IN PROCESSING THE PROPOSAL. SSN SOLICITED UNDER NSF ACT OF 1950, AS AMENDED.

DO NOT DUPLICATE THIS PAGE AS PART OF THE PROPOSAL

Every prospective grantee must complete the section on certification on the Cover Sheet (NSF Form 1207 (Rev. 10/98) submitted with each proposal. Instructions for the two certifications are below:

INSTRUCTIONS ON CERTIFICATION OF NON-DELINQUENCY BY APPLICANTS FOR FEDERAL ASSISTANCE

The certification of non-delinquency applies only to the organization requesting financial assistance and not to the individual Principal Investigator.

For the purposes of this certification, the following definitions of delinquency apply:

Direct loans — a debt more than 31 days past due on a scheduled payment

Grants — recipients of a "Notice of Grants

Cost Disallowance" who have not repaid the disallowed amount or who have not resolved the disallowance

Guaranteed and insured loans — recipients of a loan guaranteed by the Federal Government that the Federal Government has repurchased from a lender because the borrower breached the loan agreement and is in default.

Examples of debts include delinquent taxes, audit disallowances, guaranteed and direct student loans, housing loans, farm loans, business loans, Department of Education institutional loans, benefit overpayments and other miscellaneous administrative debts.

INSTRUCTIONS ON CERTIFICATION REGARDING DEBARMENT AND SUSPENSION

1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.

3. The certification in this clause is any material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

4. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has

become erroneous by reason of changed circumstances.

5. The terms covered transaction, debarred, suspended ineligible, lower tier-covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.

6. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

7. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions.

8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

CERTIFICATION

(1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Instructions for Certification

1. By signing the NSF Proposal Cover Sheet, NSF Form 1207, and submitting this proposal, the grantee is providing the certifications set out below.
2. The certification set out below is a material representation of fact upon which reliance was placed when the agency determined to award the grant. If it is later determined that the grantee knowingly rendered a false certification, or otherwise violates the requirements of the Drug-Free Workplace Act, the agency, in addition to any other remedies available to the Federal Government, may take action authorized under the Drug-Free Workplace Act.
3. For grantees other than individuals, Alternate I applies.
4. For grantees who are individuals, Alternate II applies.

Certification Regarding Drug-Free Workplace Requirements

Alternate I (Grantees Other Than Individuals)

The grantee certifies that it will or will continue to provide a drug-free workplace by:

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- (b) Establishing an ongoing drug-free awareness program to inform employees about —
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will —
 - (1) Abide by the terms of the statement; and
 - (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace, no later than five calendar days after such conviction;
- (e) Notifying the agency in writing, within 10 calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction.

Employers of convicted employees must provide notice, including position title, to every grant officer or other designee on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;
- (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted —
 - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
- (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).

Alternate II (Grantees Who Are Individuals)

- (a) The grantee certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance in conducting any activity with the grant.
- (b) If convicted of a criminal drug offense resulting from a violation occurring during the conduct of any grant activity, he or she will report the conviction, in writing, within 10 calendar days of the conviction, to every grant officer or other designee, unless the Federal agency designates a central point for the receipt of such notices. When notice is made to such a central point, it shall include the identification number(s) of each affected grant.

(For NSF, grantee notification should be made to the Cost Analysis/Audit Resolution Branch, Division of Contracts, Policy & Oversight, NSF, Arlington, VA 22230)

TABLE OF CONTENTS

For font-size and page-formatting specifications, see GPG Section II.C.

Section	Total No. of Pages in Section	Page No.* (Optional)*
Cover Sheet (NSF Form 1207) (Submit Page 2 with original proposal only)		
A Project Summary (not to exceed 1 page)	_____	_____
B Table of Contents (NSF Form 1359)	_____	_____
C Project Description (including Results from Prior NSF Support) (not to exceed 15 pages) (Exceed only if allowed by a specific program announcement/solicitation or if approved in advance by the appropriate NSF Assistant Director or designee)	_____	_____
D References Cited	_____	_____
E Biographical Sketches (Not to exceed 2 pages each)	_____	_____
F Budget (NSF Form 1030, plus up to 3 pages of budget justification)	_____	_____
G Current and Pending Support (NSF Form 1239)	_____	_____
H Facilities, Equipment and Other Resources (NSF Form 1363)	_____	_____
I Special Information/Supplementary Documentation	_____	_____
J Appendix (List below) Include only if allowed by a specific program announcement/solicitation or if approved in advance by the appropriate NSF Assistant Director or designee)	_____	_____

Appendix Items:

*Proposers may select any numbering mechanism for the proposal. The entire proposal, however, must be paginated. Complete both columns only if the proposal is numbered consecutively.

**SUMMARY
PROPOSAL BUDGET**

ORGANIZATION				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (MONTHS)		
PRINCIPAL INVESTIGATOR/PROJECT DIRECTOR				AWARD NO.	Proposed	Granted	
A. SENIOR PERSONNEL: PI/PD, Co-PIs, Faculty and Other Senior Associates List each separately with name and title. (A.7. Show number in brackets)				NSF-Funded Person-months		Funds Requested By Proposer	Funds Granted by NSF (If Different)
				CAL	ACAD	SUMR	
1.							\$
2.							
3.							
4.							
5.							
6. () OTHERS (LIST INDIVIDUALLY ON BUDGET EXPLANATION PAGE)							
7. () TOTAL SENIOR PERSONNEL (1-6)							
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1. () POSTDOCTORAL ASSOCIATES							
2. () OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)							
3. () GRADUATE STUDENTS							
4. () UNDERGRADUATE STUDENTS							
5. () SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)							
6. () OTHER							
TOTAL SALARIES AND WAGES (A + B)							
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)							
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)							
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
TOTAL EQUIPMENT							
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)							
2. FOREIGN							
F. PARTICIPANT SUPPORT							
1. STIPENDS \$ _____							
2. TRAVEL _____							
3. SUBSISTENCE _____							
4. OTHER _____							
() TOTAL PARTICIPANT COSTS							
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES							
2. PUBLICATION/DOCUMENTATION/DISSEMINATION							
3. CONSULTANT SERVICES							
4. COMPUTER SERVICES							
5. SUBAWARDS							
6. OTHER							
TOTAL OTHER DIRECT COSTS							
H. TOTAL DIRECT COSTS (A THROUGH G)							
I. INDIRECT COSTS (F&A) (SPECIFY RATE AND BASE)							
TOTAL INDIRECT COSTS (F&A)							
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)							
K. RESIDUAL FUNDS (IF FOR FURTHER SUPPORT OF CURRENT PROJECT SEE GPG II.D.7.j.)							
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)							\$
M. COST SHARING: PROPOSED LEVEL \$				AGREED LEVEL IF DIFFERENT: \$			
PI/PD TYPED NAME AND SIGNATURE*				DATE	FOR NSF USE ONLY		
					INDIRECT COST RATE VERIFICATION		
ORG. REP. TYPED NAME & SIGNATURE*				DATE	Date Checked	Date of Rate Sheet	Initials-ORG

INSTRUCTIONS FOR USE OF SUMMARY PROPOSAL BUDGET (NSF FORM 1030)

1. General

- a. Each grant proposal, including requests for supplemental funding, must contain a Budget in this format unless a pertinent program announcement/solicitation specifically provides otherwise. A Budget need not be submitted for incremental funding unless the original grant letter did not indicate specific incremental funding or if adjustments to the planned increment exceeding the greater of 10% or \$10,000 are being requested.
- b. Copies of NSF Form 1030 and instructions may be reproduced locally.
- c. A separate form should be completed for each year of support requested. An additional form showing the cumulative budget for the full term requested should be completed for proposals requesting more than one year's support. Identify each year's request (e.g., "First year," or "Cumulative Budget," etc.) in the margin at the top right of the form.
- d. Completion of this summary does not eliminate the need to document and justify the amounts requested in each category. Such documentation should be provided on additional page(s) immediately following the budget in the proposal and should be identified by line item. The documentation page(s) should be titled "Budget Justification."
- e. If a revised budget is required by NSF, it must be signed and dated by the Authorized Organizational Representative and Principal Investigator and submitted in at least the original and two copies.

2. Budget Line Items

A full discussion of the budget and the allowability of selected items of cost is contained in the *Grant Proposal Guide* (GPG), *NSF Grant Policy Manual* (GPM) (NSF 95-26, periodically revised), and other NSF program announcements/solicitations. The following is a brief outline of budget documentation requirements by line item. (NOTE: All documentation or justification required on the line items below should be provided on the Budget Justification page(s).)

A., B., and C. Salaries, Wages and Fringe Benefits (GPM 611). See definitions in GPG Appendix C. List individually, all senior personnel who were grouped under Part A, the requested person-months to be funded, and rates of pay.

D. Equipment (GPM 612). Items exceeding \$5,000 and 1 year's useful life are defined as permanent equipment (unless lower thresholds are established by the organization). List item and dollar amount for each item. Justify.

E. Travel (GPM 614 and GPM 760). Address the type and extent of travel and its relation to the project. Itemize by destination and cost and justify travel outside the United States and its possessions, Puerto Rico, Canada and Mexico. Include dates of foreign visits or meetings. Air fares are limited to round trip, jet-economy rates.

F. Participant Support (GPM 618). Normally, participant support costs only may be requested for grants supporting conferences, workshops, symposia or training activities. Show number of participants in brackets. Consult GPG or specific program announcement/solicitation for additional information.

G. Other Direct Costs.

1. Materials and Supplies (GPM 613). Indicate types required and estimate costs.
2. Publication, Documentation and Dissemination (GPM 617). Estimate costs of documenting, preparing, publishing, disseminating, and sharing research findings.
3. Consultant Services (GPM 616). Indicate name, daily compensation (limited to individual's normal rate or daily rate paid for Level IV of the Executive Schedule, whichever is less), and estimated days of service, and justify. Include travel costs, if any.
4. Computer Services (GPM 615). Include justification based on estimated computer service rates at the proposing institution. Purchase of equipment should be included under D.
5. Subawards (GPM 313). Also include a complete signed budget NSF Form 1030 for each subaward and justify details.
6. Other. Itemize and justify. Include computer equipment leasing and tuition remission. (GPG II.D.7.f and II.D.7.a.ii)

I. Indirect Costs (GPM 630) (Also known as Facilities and Administrative Costs for colleges and universities). Specify current rate(s) and base(s). Use current rate(s) negotiated with the cognizant Federal negotiating agency. See GPM for special policy regarding grants to individuals, travel grants, equipment grants, doctoral dissertation grants and grants involving participant support costs (GPM, Chapter VI).

K. Residual Funds (GPG II.D.7.j). This line is used only for budgets for incremental funding requests on continuing grants. Grantees should provide a rationale for residual funds in excess of 20% as part of the project report. (See GPG VII.G)

L. Amount of Request. Line L will be the same as Line J unless the Foundation disapproves the carryover of funds. If disapproved, Line L will equal J minus K.

M. Cost Sharing (GPM 330). Include any specific cost sharing amounts in excess of the minimum one percent required under unsolicited research proposals. Include the estimated value of any in-kind contributions. Discuss the source, nature, amount and availability of any proposed cost sharing on the Budget Justification page. If a proposal budget includes a specific cost sharing level, the identified cost sharing level is expected to be included as a requirement in the award.

PROPOSERS MUST NOT ALTER OR REARRANGE THE COST CATEGORIES AS THEY APPEAR ON THIS FORM, WHICH HAS BEEN DESIGNED FOR COMPATIBILITY WITH DATA CAPTURE BY NSF'S MANAGEMENT INFORMATION SYSTEM. IMPROPER COMPLETION OF THIS FORM MAY RESULT IN RETURN OF PROPOSAL.

FACILITIES, EQUIPMENT & OTHER RESOURCES

FACILITIES: Identify the facilities to be used at each performance site listed and, as appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Use "Other" to describe the facilities at any other performance sites listed and at sites for field studies. Use additional pages if necessary.

Laboratory:

Clinical:

Animal:

Computer:

Office:

Other: _____

MAJOR EQUIPMENT: List the most important items available for this project and, as appropriate, identify the location and pertinent capabilities of each.

OTHER RESOURCES: Provide any information describing the other resources available for the project. Identify support services such as consultant, secretarial, machine shop, and electronics shop, and the extent to which they will be available for the project. Include an explanation of any consortium/contractual/subaward arrangements with other organizations.

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies needing information as part of the review process or in order to coordinate programs; and to another Federal agency, court or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 63 *Federal Register* 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 *Federal Register* 268 (January 5, 1998). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Mary Lou Higgs
Acting Reports Clearance Officer
Information Dissemination Branch
Division of Administrative Services
National Science Foundation
Arlington, VA 22230

NATIONAL SCIENCE FOUNDATION

ARLINGTON, VA 22230

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RETURN THIS COVER SHEET TO ROOM P35 IF YOU
DO NOT WISH TO RECEIVE THIS MATERIAL , OR IF
CHANGE OF ADDRESS IS NEEDED , INDICATE
CHANGE INCLUDING ZIP CODE ON THE LABEL (DO
NOT REMOVE LABEL).

OMB 3145-0058
PT 34, 18, 04, 22, 42
KW 0600000, 0400000, 1010000
0502031, 0502023, 0502042

NSF 99-2
(Replaces NSF 98-2)